DOCUMENT RESUME

ED 180 149 EC 121 848

TITLE A Study of the Integration of Handicapped Students in the Regular Schools of the Calgary Board of Education. Final Report. Findings, Conclusions and Recommendations.

INSTITUTION Canadian Inst. for Research, Calgary (Alberta).

SPONS AGENCY Alberta Dept. of Education, Edmonton. Planning and Research Branch.; Calgary Board of Education (Alberta).

PUB DATE 30 May 78

NOTE 84p.; See EC 121 847 for Complete Report

EDRS PRICE MF01/PC04 Plus Postage.

DESCRIPTORS *Educational Needs; *Foreign Countries; *Handicapped Children; *Mainstreaming; *Public Schools

IDENTIFIERS *Calgary Board of Education Alberta; *Canada

ABSTRACT

The document presents the final report of a 1977 study on the extent and effects of mainstreaming handicapped children into the Calgary Public School System in Canada. Summary statements of study findings are provided together with a discussion of conclusions and recommendations. The specifications which guided the study design are listed, along with the set of research questions contained in the Request for Proposal. Design and sample descriptions are given for each data collection procedure. Summary statements of findings are offered from each of the 10 different data sources: literature review, investigation into mainstreaming in non-Calgary school systems, interviews with knowledgeable local representatives, local statistical and descriptive data, regular school data, teacher completed behavior checklists, principal interviews, regular teacher interviews, special education teacher interviews, and handicapped student and parent interviews. Conclusions and recommendations concern the following areas: the need for board leadership and development, the need for individualized planning for mainstreamed students, the need for a longitudinal impact study, the need for demonstration schools, the need for improved strategy in all schools with mainstreamed students, and the need for continued board support of special education services and of mainstreaming. A summary of the entire study is appended. (DLS)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED180149

FINAL REPORT

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

A STUDY OF THE INTEGRATION OF HANDICAPPED STUDENTS IN THE REGULAR SCHOOLS OF THE CALGARY BOARD OF EDUCATION

Commissioned by:
Calgary Board of Education
Education Centre Building,
515 Macleod Trail S.E.
Calgary, Alberta
T2G 2L9

Produced by:
Canadian Institute for Research
109 Brentwood Professional Building
3501 Charleswood Drive N. W.
Calgary, Alberta
T2L 2C2

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Th. R. Feniske

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EC121848

May 30, 1978

Partially Funded by the Planning and Research Branch of Alberta Education

Abstract

The Canadian Institute for Research was commissioned in June 1977 by the Calgary Board of Education to study the extent and the effects of integration of handicapped children into the regular schools of the Calgary Public School System. Recommendations were requested concerning optimal levels of integration, and concerning costs of achieving these optimal levels.

Background information was obtained through literature review and through preliminary exploratory interviews with various knowledgeable persons in the Calgary community. Extent of integration was assessed through analysis of statistical records from central administrative offices, and through direct questioning of principals. Opinions concerning effects of and desired levels of integration were sought through interviews with principals, regular teachers, special education teachers and parents of handicapped children. Contact was established with five other Canadian school systems of comparable size to the Calgary public system. The non-Calgary systems were questioned for information on extent of integration within their schools, and for report of operational problems or successes which could be relevant to Calgary.

Findings indicate that integration is best defined as a multiple concept which can refer to more than one type of educational arrangement. The research literature does not come to definite conclusions concerning the effects of integration. However, respondents interviewed in Calgary were consistent in their views that integration is generally desirable if the student has been appropriately placed and if adequate resource support is provided. Teachers and principals generally do not support the integration of students with severe handicapping conditions. The Calgary Board of Education does in fact support considerable amounts of integration activity at all levels of an adapted Cascade system. This activity cannot be said to have reached the status of a coherent program, since statements of philosophy, goals and guidelines have not been fully developed.

Recommendations are addressed to the need to rationalize and plan for support of the mildly and moderately handicapped children presently located in regular classrooms. Integration of children with severe handicapping conditions is recommended only on the basis of careful assessment of each individual case. The need for the continuing existence of some segregated facilities is recognized. It is suggested that the Board experiment with prototype models of resource delivery to several integrated schools in the next two years. The use of prototype models is recommended to allow time for assessment and on-going planning as systems are still being developed.

Members of the Study Steering Committee

Mr. G.L. Fowler, Chairman
Superintendent of Instructional Services
Calgary Board of Education
Education Centre Building, 515 Macleod Trail SE
Calgary, Alberta T2G 2L9

Mrs. I.C. Martini, Trustee
Calgary Board of Education
Education Centre Building, 515 Macleod Trail SE
Calgary, Alberta T2G 2L9

Mrs. D.B. Corbett, Principal
Albert Park Elementary School
1317 - 27 Street SE
Calgary, Alberta T2A 0Y2

Dr. C. Rhodes, Education Consultant
Planning and Research Branch
Alberta Education
Devonian Building, 11160 Jasper Avenue
Edmonton, Alberta T5K 0L2

Mrs. M. Richardson, Chairman
Society for the Hearing Impaired
4235 - 53 Street NW
Calgary, Alberta

Dr. C.H. Sangster
Associate Superintendent of Student Services
Calgary Board of Education
Education Centre Building, 515 Macleod Trail SE
Calgary, Alberta T2G 2L9

Members of the Research Staff

Principal Investigator

Dr. G.B. Jones, Vice-President
Canadian Institute for Research

Project Management

Dr. W.R. Unruh, President
Canadian Institute for Research

Dr. M.H. Nygaard, Vice-President and General Manager
Canadian Institute for Research

Ms. J.E. O'Connell, Senior Research Associate
Canadian Institute for Research

Ms. R.H. Driscoll, Senior Research Associate
Canadian Institute for Research

Special Project Consultants

Dr. P. Dahl, Associate Research Scientist
American Institute for Research
Palo Alto, California

Dr. G. Loken, Associate Professor
Department of Educational Administration
University of Calgary

Members of the Special Education Advisory Panel

Dr. G. Kysela, Associate Professor
Department of Education Psychology
University of Alberta

Dr. J. McLeod, Director
Institute of Child Guidance and Development
Department of Special Education
University of Saskatchewan

Dr. J.V. Van Tighem, Chief Superintendent (retired)
Catholic School Centre
Calgary, Alberta

Acknowledgements

The staff of the Canadian Institute for Research acknowledges with appreciation the contributions of the following persons and groups of persons:

The members of the study Steering Committee, Mr. Fowler, Mrs. Martini, Mrs. Corbett, Dr. Rhodes, Mrs. Richardson, and Dr. Sangster. The Committee met every four to six weeks during the life of the study. Discussion with the Committee was instrumental in establishing and maintaining direction of the study. Particular appreciation is expressed to the Committee Chairman and Project Monitor, Mr. G. Fowler, for his continuing support.

The members of the Special Education Advisory Panel, Dr. Kysela, Dr. McLeod and Dr. Van Tighem. Their contributions during formulation of the conclusions and recommendations for the study were most helpful.

Dr. G. Loken, who constructed the cost estimates for the recommendations contained in this final report.

The interviewers and research assistants, Ms. R. van Raamsdonk, Ms. S. Babwi, Mrs. D. Sandercock, Mrs. B. Spear, Mr. M. McLeod, and Ms. E. Hogg, who were present at different stages of the study.

The teachers and principals of the Calgary Board of Education. Without their cooperation, this study would not have been possible.

Other Reports

There are two major appendices to this report, each bound in the Complete Report.

Appendix A: COSTING PROGRAMS IN SPECIAL EDUCATION is a discussion of a proposed methodology to estimate costs of implementation of the recommendations contained in this Final Report. The cost paper was prepared by Dr. G. Loken of the University of Calgary.

Appendix B: SUPPORTING REPORTS, BY DATA SOURCE provides complete reporting of all the data compiled for the study. The study was comprised of a number of data-collection exercises from several different information sources. The results of each data-collection exercise are summarized in this Final Report. Full reporting of methods and results is available in Appendix B, under the following titles:

Report #1 : Literature Review
Calgary Populations
Report #2 : Statistical Data; Extent
Report #3 : Knowledgeable Residents; Definitions; Extent, Impact, Resources
Report #4 : Regular Schools; Extent, Resources
Report #5 : Principals; Extent, Impact, Resources
Report #6 : Regular Teachers; Extent, Impact, Resources
Report #7 : Special Education Teachers; Extent, Impact, Resources
Report #8 : Students, General Population; Special Learning Needs
Report #9 : Handicapped Students and Their Parents; Impact Non-Calgary Populations
Report #10: School Systems; Definitions, Extent, Impact, Resources

Copies of the Complete Report which include the Final Report and Appendix A and Appendix B are available for review from the offices of the Calgary Board of Education, or from the Canadian Institute for Research. Copies of the Complete Report may be borrowed from the following libraries: Canadian universities, ASTA, ATA, CASS, AFHSA, and Regional Offices of Alberta Education. Hard copy or microfiche may be purchased from the ERIC Document Service.

Table of Contents

	Page
Abstract	i
Members of the Study Steering Committee	ii
Members of the Research Staff	iii
Acknowledgements	iv
Other Reports	v
Disclaimer	viii
INTRODUCTION	1
Organization of this Report	1
TERMS OF REFERENCE	3
METHODS	6
Definitions	6
Research Procedures	6
RESULTS	11
A. Summary of the Literature Review	11
B. Summary of Investigation of Integration in Non-Calgary School Systems	14
C. Summary of Interviews with Knowledgeable Local Representatives	17
D. Summary of Local Statistical and Descriptive Data	19
E. Summary of Data Collected from Regular Schools	23
F. Summary of Results from Behaviour Checklist Completed by Selected Teachers	27
G. Summary of Interview Data from Principals	29
H. Summary of Interview Data from Regular Teachers	33
I. Summary of Interview Data from Special Education Teachers	37
J. Summary of Interview Data from Handicapped Students and Their Parents	41
CONCLUSIONS, COMMENDATIONS AND RECOMMENDATIONS	44
A. Need for Board Leadership and Development	46
B. Need for Individualized Planning for Integrated Students	50
C. Need for a Longitudinal Impact Study	54
D. Need for Demonstration Schools	56

Table of Contents Continued

	Page
E. Need for Improved Strategy in all Schools with Integrated Handicapped Students	62
F. Need for Continued Board Support of Special Education Services, and of Integrated Education .	65
Attachment A	
Summary: A Study of the Integration of Handicapped Students in the Regular Schools of the Calgary Board of Education	68

The members of the research staff consulted frequently with the study Steering Committee throughout the life of the project. A Special Education Advisory Panel was created to advise during the preparation of conclusions, commendations and recommendations. However, responsibility and ownership for the recommendations in the final report belong solely with the Canadian Institute for Research. No endorsement of the recommendations, by either the Steering Committee or the Special Education Advisory Panel, should be assumed.

INTRODUCTION

In January of 1977, the Calgary Board of Education issued a Request for Proposal through the office of the Chief Superintendent. Proposals were requested for a study to forward recommendations concerning desired levels of integration of handicapped children within regular school environments, and to provide cost estimates for the recommendations. The Canadian Institute for Research was selected to contract for the study. The Contract was signed in June 1977, and the final report was delivered on May 30, 1978.

The study design called for a variety of data-collection procedures. The literature was reviewed to provide background on the factors involved in integration and its effects. Other Canadian school systems were surveyed for assessment of their level of activity with respect to integration. Calgary teachers, principals and parents were interviewed for opinions on effects of present levels of integration, and for opinions concerning desired levels of integration. Records from the administrative offices of the Board were examined for statistical description of present integration levels.

Field work began in October of 1977, and was continued at intervals into April of 1978. Draft reports of findings were released to the Special Education Advisory Panel prior to the writing of this final report. Conclusions and recommendations were formulated in the light of the best possible synthesis of all findings.

Organization of this Report. Complete report of study methods and findings is provided in a series of ten supporting reports, printed under separate cover. This final report contains summary statements of findings, together with discussion of conclusions and recommendations.

There are five sections following this introductory chapter.

TERMS OF REFERENCE provides, in more detail, the specifications which guided the study design. The set of research questions contained in the Request for Proposal is provided.

METHODS provides design and sample description for each data-collection procedure.

RESULTS provides summary statements of findings from each of the ten different data sources.

CONCLUSIONS, COMMENDATIONS AND RECOMMENDATIONS provides final conclusions and discussion, together with listing of recommendations which are advanced for consideration by the Calgary Board of Education. Achievements of the Board are noted under the form of commendations.

TERMS OF REFERENCE

The Request for Proposal calling for this study summarized clearly the context within which the study had been commissioned. In the year preceding the decision to proceed with a study, an exchange of briefs had taken place between the Board and various local associations. The exchange of briefs was initiated by one association which had been constituted for the purpose of lobbying for increased school integration for the handicapped. This association presented the Board with a series of recommendations which, if implemented, would have had the effects of increasing the extent of integration, modifying assessment practice, introducing partial lay control of school placement, and modifying methods of coordinating ancillary services. A paper prepared in rejoinder by the Board administration asserted that the Board did already provide considerable amounts of service for the handicapped, and that the recommendations were therefore not supported. Further briefs from several associations spoke on several sides of the issue.

Subsequent to this exchange of briefs, the Board moved that the administration be requested "to undertake studies on the possible effects of integration of handicapped students in the regular school programs with the prospect of increasing integration and that the report include specifics with respect to cost implications..." The present study is a response to the above motion.

The specific concerns of the study were outlined in a set of research questions listed in the Request for Proposal. The questions have been copies below:

The purpose of this study is to determine:

1. What would be the following costs to the system if integration were fully implemented?

a) Costs of facility changes in many or all schools should be investigated.

b) Costs of additional support personnel should be considered.

c) Costs of additional equipment should be investigated.

d) Costs of in-service training for regular classroom teachers should be considered.

e) Costs of additional transportation for severely handicapped children should be considered.

2. *What impact would integration have on:*

   a) The normal child in the classroom with handicapped children present.

   b) The handicapped child in the regular classroom.

   c) The community acceptance of such a program.

   d) The effect on the teacher and class size.

   e) The cost of making necessary renovations and alterations to existing school facilities to accommodate the inclusion of handicapped children.

3. *What does a fairly comprehensive review of the literature with respect to integration indicate?*

4. *The extent to which integration of handicapped children has been implemented in the Calgary Public School System and any changes which should be instituted.*

5. *A review of other school systems of relative size in Canada and the extent to which they have undertaken integration of handicapped children in the regular classroom and the results of such integration.*

The briefs, and the paper prepared in rejoinder by the Board administration, were used in the early design stages to help define and delimit the operational content of the study. The briefs were scanned for mention of pertinent issues and concerns. Areas of concern mentioned in the briefs included: need for a comprehensive plan for integration in the Calgary system; desirability of increasing current integration activity at all levels; need for additional teacher resource supports; request for evaluation of the assessment procedures, with particular reference to use of labels and extent of emphasis on use of intelligence measures; request for evaluation of present placement procedures; and need for in-service training for teachers and principals.

References

1. Brief to Calgary Board of Education. "Re: Integration of Handicapped Children Into the Regular School System." Prepared by: Association for the Integration of Handicapped Children. Calgary, Alberta. April 1976.

2. Calgary Board of Education. "A Report of the Integration of Handicapped Children in Calgary Public Schools." Prepared by: Division of Special Educational Services and the Division of Instruction, Calgary Board of Education, Calgary, Alberta. September 28, 1976.

3. "Response To A Report on the Integration of Handicapped Children in Calgary Public Schools by the Division of Special Educational Services and the Division of Instruction." Prepared by: Association for the Integration of Handicapped Children. Calgary, Alberta. November 23, 1976.

4. Request for Proposal "The Calgary Board of Education is requesting proposals for a comprehensive study dealing with the integration of the handicapped students into the regular classes of the Calgary Board of Education." Calgary Board of Education, Calgary, Alberta. March 3, 1977.

METHODS

Definitions. The Request for Proposal questions listed in the previous section do not define the key terms "handicapped" and "integration." Nor do the terms find common understanding in everyday speech, as will be discussed subsequently in this report. The definition of "handicapped" adopted for this study is one based on the educational requirements of the student. Severity of handicap was classified according to the preferred educational placement for the student. "Integration" was defined by a very broad definition which was expected to cover any form of arrangement where a handicapped child was placed in some relationship with non-handicapped students. The following definitions were used in many contexts throughout the study:

> *Handicapped Student: A handicapped student is one who deviates from the average or normal child in a mental, physical, or social way to the extent that he or she requires a modification in regular school practices, (that is, special education services), in order to develop to his/her maximum capacity.*
>
> *Mild Handicapping Conditions: are ones that enable students to work well in regular classes full-time without special assistance or with occasional, limited supportive services and supplementary instructional assistance.*
>
> *Moderate Handicapping Conditions: are those that usually require students to participate less than full-time in regular classes because they need the assistance available in special classes, resource rooms, or instructional stations part-time or full-time.*
>
> *Severe Handicapping Conditions: are ones that usually require full-time and extensive special assistance in home, hospital, residential, or other total care setting.*
>
> *Integration: refers to the education of handicapped students in regular schools of the Calgary Board of Education.*

Research Procedures. The specific research procedures are described below, according to the research questions which each was designed to address.

Request for Proposal Question #1: What would be the following costs to the system if integration were fully implemented?

a) Costs of facility changes in many or all schools should be investigated.

b) Costs of additional support personnel should be considered.

c) Costs of additional equipment should be investigated.

d) Costs of in-service training for regular classroom teachers should be considered.

e) Costs of additional transportation for severely handicapped children should be considered.

Complete information on costing procedures is presented in a separately bound report. Briefly, operational budgets were used to derive unit costs for the various components attached to integration activity. Total costs can be calculated on the basis of aggregated unit costs. Where it was desirable, indices were proposed to relate the costs of integrated programs to the costs of regular programs. Estimates were presented in such a way that they can readily be modified if more current or relevant data becomes available.

Request for Proposal Question #2: What impact would integration have on:

a) The normal child in the classroom with handicapped children present.

b) The handicapped child in the regular classroom.

c) The community acceptance of such a program.

d) The effect on the teacher and class size.

e) The cost of making necessary renovations and alterations to existing school facilities to accommodate the inclusion of handicapped children.

Impact of integration was addressed in six of the ten data procedures.

The literature was reviewed for research evidence of impact (see description below under Question #3).

Representatives from five other Canadian school systems were asked for opinions concerning impact of integration in their cities (see description below under Question #5).

Impact in Calgary was investigated through interviews with representatives of four populations: principals of schools with handicapped students; regular teachers with handicapped students in their classes; teachers of special education classes; and parents of handicapped students. Some students were interviewed as well. All respondents were interviewed personally, using semi-structured instruments. Teachers were also asked to complete a closed rating scale to indicate effectiveness of current class placement for their handicapped students.

Principals and teachers were selected from among schools which were known to have handicapped pupils. The list of schools was constructed from two sources:

a) Principals from a random sample of Calgary public schools had previously been asked to list numbers of handicapped students in their schools (see description under Question #4). Those schools which reported having either moderately or severely handicapped pupils were put on a list for the impact study. Twenty-three of an original group of 29 responding schools fell into this category.

b) Any regular schools with special education classes were added to the list. These schools numbered an additional 28.

From the total of 51 schools, a random sample of 25 was selected. In each school, the principal, one special education teacher and one regular teacher with handicapped pupils were interviewed. Where more than one teacher was eligible for interview, the principal was assisted to make a random selection. On occasion, scheduling availability had the effect of making a random choice. The original sample size was increased slightly to account for low representation of some types of schools, and the final numbers of interviews conducted were 27 with principals, 28 with regular teachers and 25 with special education teachers.

Parents of handicapped students were selected at random from lists of names of students registered in a special education program. These students had all been officially assessed and defined as "handicapped" by the Special Education department. Where it was feasible, the student was interviewed as well. In some instances, the parents refused permission for the student to be interviewed. In several other cases, interviews were conducted but little useful information resulted due to the low verbal capacity of the student. In total, 33 sets of parents (father, mother or both) were interviewed.

All the information gathered for the impact study was based on personal opinion and observation. Validity of the information was assessed through checking the consistency of reports from the different data sources.

Request for Proposal Question #3: What does a fairly comprehensive view of the literature with respect to integration indicate?

The literature review was focussed on both local documents and standard academic sources of research material. Over 400 abstracts were surveyed to produce a list of 96 documents which were reviewed in detail.

Results of the literature review are reported according to nine headings: impact; definitions of integration; desired level of integration; current levels of integration in other school systems; indicators and measures of extent of integration; definitions of handicapped; teacher and resources and supports; structural/architectural/equipment requirements; evaluation instruments used to assess integration programs.

Request for Proposal Question #4: The extent to which integration of handicapped children has been implemented in the Calgary Public School System and any changes which should be instituted.

Extent of integration was assessed in a preliminary descriptive sense through a series of interviews with selected members of the educational and other communities in Calgary. Respondents were selected on the basis of their personal experience either with integrated education or with handicapped persons. These interviews served a double purpose: to provide initial description of integration, and to provide definitions of topics which should be addressed in later stages of the study.

Extent of integration was assessed in a statistical sense from secondary data obtained from the Central Offices of Board administration. Statistical information on numbers of students in special education programs, on numbers of specialized staff, and on distribution of special classes was obtained and analysed in a form suitable for study objectives.

Further specification of extent of integration was obtained by going directly to the schools. A stratified random sample of regular schools was selected, with the three levels of elementary, junior high and senior high represented. Numbers of schools in each level of the sample were 21 elementary, 7 junior high and 3 senior high. These numbers are 18%-20% of the totals in their respective strata. Two sets of research procedures were carried out in each of these schools:

a) Each principal was asked to complete a lengthy form describing various operational aspects related to the presence of handicapped students in the school. An accurate count of numbers of handicapped pupils was requested, followed by sections dealing with amount of time spent in integrated activity; pupil/teacher

ratio; special resource personnel; training and planning for integration; and special materials and architectural modifications. Thirty of the 31 schools responded to the questionnaire, with one principal refusing to respond. One additional school returned the form too late to be included in the analysis. Results are presented for 29 of the random sample of 31 schools, or 94% of the sample.

b) All teachers in each of the sample schools were asked to complete a form in which they provided ratings on each of their students. Ratings took the form of a dichotomous, presence-or-absence indication of a large number of behavioural characteristics assumed to be representative of handicapping conditions. The ratings were obtained in an attempt to construct estimates of numbers of students who evidence learning problems as observed by their teachers. Estimates would be used to determine the approximate number of students who are fully integrated, but working under conditions of a mild handicapping condition. About 66% of the eligible students were rated, which is equivalent to 11% of the student population in Calgary.

Extent of integration was also discussed during the impact interviews with principals, regular teachers and special education teachers (see discussion under Question #2). Principals and teachers were asked for anecdotal reports of ways in which integration was organized, whether special arrangements were made, what changes had resulted in normal classroom routine, etc.

Request for Proposal Question #5: A review of other school systems of relative size in Canada and the extent to which they have undertaken integration of handicapped children in the regular classroom and the results of such integration.

Population statistics and numbers of enrolled pupils were used to construct a list of metropolitan school systems in Canada similar in size to the Calgary Board of Education. The study's Steering Committee selected five systems who were subsequently contacted for study. The systems studied were Vancouver School District No. 39, Edmonton Public Schools, The Board of Education for the Regina Public School District No. 4, The Board of Education for the Borough of North York and the Protestant School Board of Greater Montreal.

Information was retrieved by telephone interview with the system's Director of Student Services or the equivalent. Topics covered were: definition of handicapped students; definition of integration; form of integrated programs; advantages and disadvantages of integration; rationale for integration; indicators and measurement of integration; staff training; special materials/ equipment/facilities.

RESULTS

A. Summary of the Literature Review

What does a fairly comprehensive review of the literature with respect to integration indicate?

Ninety-six (96) documents were reviewed in detail during the review of research literature. Complete reporting is found in supporting Report #1: Literature Review.

Impact on Handicapped Students

1. Research on the short term effects of integration does not demonstrate the absolute superiority of any one form of educational placement for the handicapped. Results are variable, depending on the measures used and depending on circumstances which may be outside the control of the researcher. However, some trends are strong enough to be reported:

a) There is virtually no evidence to support segregation as a method for improving cognitive achievement of educably mentally handicapped (EMH) children. The weight of the findings suggests that either integration is advisable, or that the locus of instruction is less important than the quality and format of instruction provided.

b) Some form of segregation is favoured for cognitive achievement of learning disabled children.

c) Results concerning development of self-concept in educably mentally handicapped children are mixed, with some support for the integrated setting. Some support for the segregated setting can be found in studies which looked at the social development of educable students.

d) There is evidence of continued negative findings concerning the social acceptability of integrated special class students. Acceptance by their non-handicapped classmates may be a continuing problem.

e) There is little research dealing with integration of the sensory impaired.

2. There is virtually no evidence concerning the long-term effects of integration. The studies which have been done are too few in number of have any collective weight.

Definition of Integration

3. "Integration" is defined partially in terms of physical placement of the handicapped student. All definitions have a general meaning of movement of the handicapped away from specialized instructional settings towards the typical educational patterns of non-handicapped society. Within this general meaning, definitions vary according to the level of integration envisaged. Levels could include placement of special classes in a regular school, placement of special class children into regular classrooms, etc.

4. Most definitions of integration include a dimension of "belonging" which goes beyond mere physical placement. To be truly and functionally integrated, a student must be physically, socially and emotionally a part of the setting. "Integration," by its very nature, includes the provision of whatever resources are necessary to bring the student into a functioning position with his/her group.

Models of Integration

5. Several different models for provision of integrated educational service to the handicapped have been designed. The most comprehensive model is the Cascade system developed by Deno. Other models specify different forms of resource room and/or itinerant support.

6. Models are all based on the principle that primary responsibility for the educational programming of the student should remain with the regular classroom teacher wherever possible.

Integration in Other School Systems

7. There is consensus of opinion that integration is occurring at an increasing rate in Canada and the United States. Few statistical data are available to quantify this statement.

Indicators and Measures of Integration Extent

8. There is no consensus in the literature regarding appropriate and feasible indicators to measure the extent of integration. Various presentations of population statistics, record of time spent in various instructional settings, models reflecting student characteristics, and cost of programs have all been forwarded as tentative possibilities.

Definition of Handicap

9. "Handicap" has traditionally been defined according to a causal, medical set of ideas, whereby handicapped individuals are classified according to the dysfunction which has caused the problem. The applicability of medical disability labels to educational settings has been criticized in recent years. Medical categories are held to be of limited use in prescribing educational programs. Further, they may cause inappropriate groupings of students, they carry expectations of low achievement levels, stigma is attached to them, and diagnosis is not always accurate.

10. More recent trends define "handicapped" according to educational deficit or learning requirement of the student. Such definitions necessarily include description of guidelines for educational programming. Educationally-based definitions of handicap are not yet developed to the point where consensus among school systems or curriculum planners has been achieved. Various tentative classification schemes have been reported in the literature.

Resource Support For Teachers

11. There is universal agreement that integration will generally have detrimental effects unless certain supports are provided to teachers. Required supports fall into four categories:

a) pre-service and in-service training;

b) support personnel such as consultants and specialized teaching resources;

c) adjustment of teaching loads;

d) additional materials and equipment

Structural/Architectural/Equipment Requirements

12. Literature on building requirements for facilities suitable for use by the physically handicapped is well-developed. Most new buildings can be built with necessary conveniences at an estimated increase in cost of less than one per cent. One study estimates that present facilities can be made accessible to the physically handicapped at an estimated conversion cost of less than five cents per square foot.

Evaluation Instruments

13. The lack of appropriate instruments for measuring effects of integration is a chronic problem in the research.

14. Few studies have been designed and/or reported which used comprehensive batteries of tests and measures.

B. Summary of Investigation of Integration in Non-Calgary School Systems

What does a review of other school systems of relative size in Canada reveal about the extent to which they have undertaken integration of handicapped children in the regular classrooms and the results of such integration?

The results apply to the study of five (5) Canadian school systems similar in size to the Calgary Public School System. For complete results, refer to supporting Report #10: School Systems.

Nature and Extent of Integration

1. All five systems provide for both segregated and integrated instructional placement for handicapped students. As in Calgary, decisions about placement of any individual child are made on a case-by-case basis.

2. All systems provide for at least some resource systems similar to those in Calgary. There are special classes for the educably mentally handicapped in all systems; some form of tutorial/resource room assistance for children with learning problems; either integrated or segregated learning experiences for the sensory impaired, depending on the severity of the handicap; transitional classes for the trainable mentally handicapped in at least one system. Some cities have the equivalent of a Learning Assistance Centre and others do not. In one system, learning disabled students are assisted by itinerant teachers, and in-school tutors are provided in another. Only one service was mentioned which is not provided in some form in Calgary; this was a segregated, off-campus program for high school students who are experiencing psychological difficulties in adapting to the regular schools.

3. One system routinely aggregates statistical information on numbers of integrated handicapped pupils, where "handicapped" is defined by the criteria specified by grant regulations of the province in question. This system defines "integration" in terms of percentage of time spent with regular students. One system could potentially aggregate statistics on numbers of integrated students but does not normally do so. This system defines "integration" in terms of a change in placement status. Three systems maintain statistics on numbers of students in various programs, but do not maintain statistics on numbers of integrated students.

4. Estimates of the numbers of schools with integrated eligible students ranged from "more than 75%" for two systems to "less than 25%" for one system.

5. Statistics on numbers of resource staff, on numbers of special classes and on numbers of students in the various programs were available for only one of the five systems.

6. The Calgary Board of Education provides at least as full a range of programs as any of the five other systems. Comparisons of amount of service provided within these programs cannot be made.

School Board Policy

7. One of the five systems works under a formal statement of Board policy on integration.

Resources to Support Integration

8. The major considerations involved in designing a successful integration program are listed with consistency from one system to another. The major considerations are: regular teacher preparation training and time availability; provision of some form of adequate specialized instruction for the student; increased cost; and peer and teacher acceptance of handicapped students.

9. All five systems report a variety of uses of materials, equipment and forms of training. These are all provided on an ad hoc basis as resources permit. No system has developed comprehensive plans for total school provision of any of these resources.

10. The major problem encountered in integration attempts has been inadequate skills and attitudes on the part of the regular teacher. The differentiation of role responsibilities between the regular and the special education teacher was mentioned as a severe problem in at least one system.

Evaluation of Integration

11. No system has developed evaluation instruments or collected evaluation data to assess its integration activity.

Cost Data

12. No system has developed accounting procedures to allow it to aggregate costs of integration activity. One system has an accounting procedure which would allow easy calculation of such costs if required.

Effects on Handicapped Students

13. Respondents generally assert that integration has had favourable outcomes. Two respondents estimated that 50%-75% of

integrated pupils have benefitted; three respondents estimated that more than 75% of pupils have benefitted.

14. Respondents are agreed that effects of integration are variable, depending on individual circumstance, and that integrated placements must be made with care.

Desired Levels of Integration

15. Respondents could not comment on desired levels of integration, as any system directions must be mandated by their respective school boards.

16. All respondents are of the opinion that integration does often benefit students, particularly in a social sense. They note, however, that academic gains are often apparent in the segregated special settings. An adequate integration program will be one which will retain the gains from both settings.

C. Summary of Interviews with Knowledgeable Local Representatives

What are the opinions of educators and representatives of the community about the integration of handicapped children in the regular schools of the Calgary Board of Education?

Twenty-six (26) interviews were conducted with various members of central Board administration, teaching staff and concerned community representatives. Results of these interviews did not form a primary data source for the study. The purpose of the interviews was to assist in clarifying the nature of the integration problem, and to identify topics for inclusion in later stages of the study. Complete results are presented in supporting Report #3: Knowledgeable Residents.

Major Concerns About Integration

Respondents identified eleven sets of concerns related to integrating handicapped students into regular classrooms:

a) the possible need to redefine allocation, control and extent of financial grants to integrated schools; specifically, the need to consider the possibility of a decentralized budget;

b) the fear that the Board will try to save money by cutting back on special education services and educating all but the most severely handicapped in regular classes;

c) the need for appropriate selection, training and support of teaching staff in integrated schools;

d) the need for careful selection and preparation of schools suitable for integration programs;

e) the need for adjustments to pupil/teacher ratio and release time for preparation;

f) the possibility of negative attitudes towards integration from parents of non-handicapped children;

g) the need to establish links of communication and coordination among special personnel, regular teachers and parents;

h) the need to establish criteria for placement of individual handicapped children;

i) the possibility that the curriculum of the regular classroom may not be suitable for handicapped students;

j) problems of social acceptance of handicapped children;

k) the fear that political pressure could force the implementation of an inadequately planned integrated system.

D. Summary of Local Statistical and Descriptive Data

To what extent has integration of handicapped children been implemented in the Calgary public school system?

Statistical records available from central administrative offices were analysed and reported in a form suitable to study objectives. For complete presentation, see supporting Report #2: Statistical Data.

Models of Integration

1. The Calgary Board of Education uses an adapted Cascade model for the placement of handicapped children.

A paper entitled "Programs-Integration" issued by the Special Education Department of the Calgary Board of Education in January 19/8 lists the following Cascade levels presently being used in the Calgary system:

Level I: Children in regular classes: handicapped but able to get along with regular class accommodation -- supported by visiting teachers, counselling, speech therapy.

Level II: Regular class attendance plus supplementary instructional services -- supported by Learning Assistance Centre, visiting teachers, follow-up, itinerant teachers, speech therapy.

Level III: Part-time special classes, gradually increasing integration with regular classes -- includes all special class pupils except the severely disturbed and trainable retarded.

Level IV: Full-time special classes -- severely disturbed and trainable retarded.

Level V: Special Stations -- in a variety of special education settings, multiple handicapped.

Level VI: Homebound -- Teachers of home-confined.

Level VII: A. Instruction in residential centre
B. "Non-educational" service, e.g. hospital wards, detention homes.

2. The Board administration has prepared at least one paper with position statements of goals and objectives for integration. Statements of philosophical rationale have not been fully developed. No current statement relating goals and objectives to operational procedures is available.

The January 1978 paper mentioned above provides description of current integration programs in Calgary, together with information describing characteristics of various handicaps. Statements of rationale, goals and objectives are not developed in this paper. A previous paper entitled "A Report of the Integration of Handicapped Children in Calgary Public Schools" was issued by the administration in September of 1976. It asserts the following positions relative to integration:

a) The Board accepts Deno's Cascade principle of educating "most" handicapped children in the regular classroom according to their learning needs.

b) Special class students will be integrated back into a regular classroom whenever feasible.

c) Placement for any handicapped child should be determined through analysis of intellectual, emotional and social competence.

d) Special classes will be retained for students who either cannot learn in the regular setting, or whose presence interferes with the learning of other students.

e) Specific handicap labels will be used, although with caution and flexibility.

f) Additional training for regular teachers is very important to successful integration.

Numbers of Resource Personnel

3. The Board employs psychologists to perform student assessments related to declaring a need for special services. There are 16.9 full-time equivalent positions for psychologists, or one for every 5,000 pupils.

4. The Board employs Visiting Teachers, Speech Pathologists, Guidance Counsellors and Remedial Clinicians and Tutors to provide support at Levels I and II of the adapted Cascade model. The remedial clinicians and tutors work within Learning Assistance Centres.

There are 32 visiting teachers, or one for every 1,500 elementary pupils.

There are 15.6 full-time equivalent positions for speech pathologists, or one for every 3,000 elementary pupils.

There are 100 full-time equivalent positions for guidance counsellors at the junior and senior high levels, or one for every 400 secondary students.

There are seven Learning Assistance Centres in the city with a total of 30.5 remedial clinicians and tutors, or one for every 2,000 elementary and junior high pupils.

5. The Board employs itinerant teachers for support to fully integrated hearing and vision impaired children at Level V of the adapted Cascade model.

There are 6.5 full-time equivalent positions for itinerant teachers for 72 integrated students, or one teacher for 12 pupils.

The local Children's Hospital also maintains a mobile multidisciplinary team in support of a small group of cerebral palsied children integrated in the early elementary grades. This activity is classified at Level V.

Numbers of Special Classes

6. There are 134 special classes in the city, comprising Levels III, IV, VI and VII of the adapted Cascade model.

Seventy-one (71) of the classes are in regular schools, comprising Level III of the model.

Sixty-one (61) are within segregated institutions, comprising Level IV and Level VII of the model.

Two (2) of the classes are for the home-confined, comprising Level VI of the model.

7. The classes in the regular schools are categorized as providing for students who are diagnosed as: Educable Mentally Handicapped (44 classes); Sensory Handicapped (hearing and vision impaired; 11 classes); Learning Disabled (9 classes); Trainable Mentally Handicapped (7 classes).

8. The classes in the segregated institutions are categorized as providing for students who are: Hospital, Institutional (4 institutions; 24 classes); Learning Disabilities (one institution; 11 classes); Trainable Mentally Handicapped (two institutions; 26 classes).

Numbers of Special Education Pupils

9. Total enrollment in special classes as of May 1978 was 1,270 pupils. This figure includes the 72 fully integrated vision impaired students. The 1,270 pupils represent about 1.5% of the total school population.

10. There are approximately 550 spaces available in the Learning Assistance Centres, given present methods of organization. This total represents spaces sufficient for 0.8% to 0.9% of the elementary and junior high student population.

Location of Services Within Grade Levels

11. The Visiting Teacher and the Speech Pathologist are assigned mainly to elementary grade levels. Psychologists work at all grade levels. Guidance Counsellors are assigned to secondary schools. The Learning Assistance Centres are for the use of elementary and junior high students.

12. Of the total number of special classes, about two-thirds are located within the elementary levels. The remaining one-third are at the secondary level.

Transportation

13. Five charter bus routes are maintained to transport special class students. Almost all students from the two schools for the trainable mentally handicapped, the school for the learning disabled and the hospital school are transported by school bus. About half of the sensory impaired students are transported by school bus.

14. Of the students in Educable Mentally Handicapped special classes in regular schools, the majority (around 60%) use public transportation. Only a small number (about 20%) walk to school.

E. Summary of Data Collected from Regular Schools

To what extent has integration of handicapped children been implemented in the Calgary Public School System, and what changes should be instituted?

Principals in a random sample of regular schools were asked to complete a lengthy questionnaire describing various operational aspects related to the presence of handicapped students in the school. Results were obtained from 29 schools of an original sample of 31. Complete reporting is presented in supporting Report #4: Regular Schools.

Numbers of Handicapped Students

1. All schools in a random sample of 29 Calgary public regular schools have at least some handicapped pupils.

2. As indicated in the following table, slightly less than one-half (13 or 45%) of the schools have at least some pupils with all of mild, moderate and severe handicapping conditions (Definitions of these terms are provided on page 6, in the METHODS section).

Level of Handicapping Condition	Number of Schools	
Mild only	9	(31%)
Mild and Moderate	5	(17%)
Mild and Moderate and Severe	13	(45%)
Moderate only	1	(3%)
Severe only	1	(3%)
TOTAL	29	(100%)

3. The sample schools varied in the numbers of students reported as having handicapping conditions. The table on the following page shows numbers of schools at the different grade levels with various numbers of handicapped students. Three observations are noted in connection with the table:

a) Reported numbers of handicapped students showed the greatest variation at the junior and senior high levels.

b) The difference in numbers between schools is only partially explained by the size of the school. Definitional considerations and real differences in proportion of students who are handicapped contribute to variation between schools.

c) The numbers in the table in fact represent handicaps. A student may be counted more than once in the data. The numbers are high estimates of numbers of handicapped students. However, the instances of multiple handicap which are present are not numerous. Numbers of handicapped students are probably no more than two or three percentage points lower than those shown in the table.

No. of Handicapped Students	School Level		
	Elementary	Junior High	Senior High
10 or less	4	1	1
11 - 49	10	2	-
50 or more	6	3	2
TOTAL	20	6	3
Minimum	1	1	4
Maximum	114	410	735
Average	41	116	291

4. The number of reported handicaps as a percentage of the total enrollment of students is 13%, 26% and 19% for the elementary, junior high and senior high levels respectively. The junior high and senior high figures are inflated by the presence of unusually large numbers from two of the schools.

5. Less than half (39%) of the handicaps have been assessed by Student Services. The remainder (61%) have been assessed by procedures developed by the individual schools. The large majority of the handicaps which have not been assessed by Student Services are located in the secondary levels.

6. The large majority of the handicaps (69%) are defined as mild handicapping conditions, while 26% are defined as moderate conditions, and 4% are defined as severe.

Segregated Activity

7. The majority (65%) of the sample schools reported no segregation, other than sending a student out to a Learning Assistance Centre or English as a Second Language Classes. Reported instances of segregation involved special class students who are segregated from academic activity, and physically handicapped students who are segregated from physical education.

Pupil/Teacher Ratios

8. Pupil/teacher ratios reported by the schools ranged from 20/1 to 32/1.

Special Personnel

9. The special resource personnel used most frequently at the elementary levels are the Visiting Teacher (100% of the schools), the School Psychologist (80% of the schools), the Speech Pathologist (80% of the schools) and the Public Health Nurse (80% of the schools). Principals were asked to rate the adequacy of service provided by these personnel. Each service was rated as adequate by one-half or fewer of the schools. "Not enough time" was the reason most often offered to explain the inadequacy.

10. Resource room teachers at the elementary level, used by 7 schools, were generally rated as adequate. School aides and remedial clinicians at the elementary level, used by 7 and 6 schools respectively, were generally rated as inadequate. Delays, lack of time were offered as reasons.

11. Two elementary schools use volunteer adults. Both rated their services as adequate.

12. The special resource personnel most frequently used at the secondary level is the Guidance Counsellor. Service is generally rated as adequate.

Special Training

13. Half of the regular schools reported no special training to expedite integration.

14. The other half reported a variety of workshops, consultation with various experts, attendance at lectures, etc. No school reported training events deliberately designed to increase skills directly related to integration.

Special Planning

15. The large majority (76%) of schools reported no special planning for integration. Where planning did take place, it generally consisted of scheduling and case conferencing for particular students.

Special Materials/Equipment/Facilities

16. About half of the schools reported the use of special materials such as tapes, video materials and controlled readers.

Most reported these materials as adequate, except where there is a shortage of supply.

17. No regular schools in the sample reported the use of special gym, home economics or shop equipment.

18. Five schools reported some architectural modification. Six schools made use of the questionnaire to express a request for architectural modification. Three of these requests were for partitioning to provide a "time-out" or resource space.

Desired Level of Integration

19. When asked if their school had the "staff, motivation and technical resources to integrate more handicapped students than it is currently doing," more than half (65%) of the schools answered "No." The reason generally given was that teachers were already working to capacity. Those schools which did reply "Yes" all qualified their answer in some fashion (e.g., if more staff were available, depending on the nature of the handicap, etc.)

20. General comments on the prospect of increased integration dealt with four areas of concern:

a) time demands on teachers;

b) teacher expertise and preparation;

c) the general quality of education;

d) the presumed impossibility of functionally integrating the severely handicapped.

F. Summary of Results from Behaviour Checklist Completed by Selected Teachers

To what extent has integration of handicapped children been implemented in the Calgary Public School System?

In an attempt to investigate the numbers of children in Calgary classrooms with mild handicapping conditions, regular teachers in a random sample of Calgary schools were asked to complete a form called the Screening Checklist of Student Behaviours. The form asked teachers to indicate which of their students exhibited certain selected behaviours characteristic of various handicapping conditions. Observations were collected on 11% of the total student population of Calgary public schools.

The summary of findings below presents the percentages of students, at the various grade levels, who are said to exhibit the behaviour items with the highest frequencies. Complete results for all items are available in supporting Report #8: Students, General Population.

Forms of Mild Handicap

1. About 10%-15% of elementary students are said to perform below grade level in the basic skill areas. The equivalent percentages at the secondary levels are about 4%-10%. These percentages are indicative of numbers of students who cannot work, to any satisfactory level of accomplishment, with the materials normally provided for use in the grade in which they are registered.

Exact percentages for each division are provided below:

a) "Performs below grade level in reading"

Grades I-III:	14.5%
Grades IV- VI:	18.0%
Grades VII- IX:	6.5%
Grades X-XII:	6.2%

b) "Performs below grade level in spelling"

Grades I-III:	8.9%
Grades IV- VI:	16.7%
Grades VII- IX:	6.0%
Grades X-XII:	4.4%

c) "Performs below grade level in arithmetic"

Grades I-III:	7.0%
Grades IV- VI:	12.4%
Grades VII- IX:	5.9%
Grades X-XII:	3.4%

2. About 15% of elementary students are said to have concentration problems. The equivalent percentage at the secondary level is about 9%.

Exact percentages for the relevant item are shown below:

a) "Is easily distracted, lacks effort and perseverence"

Grades	I-III:	14.5%
Grades	IV- VI:	14.2%
Grades	VII- IX:	9.4%
Grades	X-XII:	7.9%

3. Other items, with lower frequencies, said to be characteristic of 4% or more of the school enrollment include the following:

"Appears to daydream frequently"

"Has difficulty organizing thought processes and/or work"

"Speaks in extremely loud or soft voice"

"Exhibits overactive, uncontrolled, impulsive behaviour"

G. Summary of Interview Data from Principals

What is the impact of integration? To what extent has integration of handicapped children been implemented in the Calgary Public School System, and what changes should be instituted?

Twenty-seven (27) principals from regular Calgary schools were interviewed. The schools had previously been identified as schools with handicapped pupils. Two-thirds of the schools had special classes located within them. Complete reporting of results is available in supporting Report #5: Principals.

Definition of Handicapped

1. Principals generally accepted the study's definition of handicapped students. They considered it a good operational definition since it made provision for the mildly handicapped student. A few principals objected to the definition on the grounds that, interpreted broadly, the definition includes the exceptionally gifted child. (The study definition of handicapped is listed on page 6 in the METHODS section).

Definition of Integration

2. Principals did not generally accept the study definition of integration. They would prefer that it read "education of students in regular classes..." Most principals felt that integration has not been achieved merely by placing a special class in a regular school. Common learning activities must be established in order to achieve true integration. (The study definition of integration is listed on page 6 in the METHODS section.)

Numbers of Handicapped Pupils

3. Principals tended to estimate that about "one or two per class" of the students are moderately handicapped, and about ten per cent of the students are mildly handicapped. The mildly handicapped were said to suffer from a wide range of emotional/cultural/behavioural/learning problems. Principals indicated concern about the growing numbers of students who seem to be falling behind in academic subjects.

Nature and Extent of Integration

4. Principals reported that special class students are almost always integrated for non-instructional activities such as concerts, assemblies and recess. Most schools integrate for physical/experience subjects such as music, art and physical education. Integration for academic subjects is rare, but is practised occasionally when it seems handicapped students are likely to benefit.

5. A handicapped student is often excluded from overnight field trips if the child's problem is such that he/she cannot care for himself/herself overnight.

6. Handicapped children who are not in special classes are generally treated just like the regular students. Modifications such as regrouping, lowering of expectations or more frequent individual assistance may be made.

7. Only four principals reported trying approaches to integration which were ineffective and had to be discontinued. Principals stated that specific integration practice has usually been considered carefully beforehand. Any activity with a high risk of failure is not attempted.

Effects on the Community

8. Most principals report no reaction from the community, either positive or negative, to the presence of handicapped students. Where there has been community reaction, it is generally the result of a specific, isolated incident.

Effects on School Administration

9. Most of the principals interviewed reported that the presence of special classes in a school creates demands on principals beyond those of a regular class. Demands result from problems either caused by or experienced by the special class students. Examples are fights on the playground, a student needing individual counselling, trouble on the school bus, case conferencing over placement decisions, etc.

Effects on Regular Teachers

10. Principals reported that teachers seem generally supportive of the presence of handicapped students in their schools, provided resources adequate to the task are provided.

Effects on the Non-Handicapped Students

11. Principals observed that the presence of handicapped students does seem to produce increased understanding and acceptance on the part of the non-handicapped students.

12. Some principals reported that the presence of handicapped students has caused no reduction in instruction time to the non-handicapped. Others reported that there has been a decrease in attention paid to the regular students. Effects in this area vary with the school.

Effects on Handicapped Students

13. Principals reported that handicapped children often seem to enjoy social benefits from integration, and that self-concept is improved. However, they caution that a situation where failure is allowed is destructive. Careful consideration must be given to all aspects of placement so that failure is not allowed to occur.

Resources to Support Integration

14. Principals reported that the key facilitators to successful integration are capable and willing teaching staff, and an acceptable pupil/teacher ratio.

15. Barriers mentioned were inexpereinced and unsympathetic teachers, attempting to integrate too quickly, and overcrowding.

16. Provision of appropriate learning materials, in-service training and teacher aide support were mentioned as important resources by principals. Architectural modification to buildings was generally rated as low priority.

Desired Levels of Integration

17. Principals generally supported the integration of handicapped students with mild and moderate conditions, provided that appropriate resource supports were provided.

18. Principals generally did not support the integration of handicapped students with severe conditions. The severely emotionally disturbed, the severely physically handicapped and children who are not toilet-continent were not seen as integratable.

19. Principals of regular schools with special classes were generally supportive of integration. Principals of regular schools which have handicapped children but no special classes tended to be apprehensive about possible negative consequences.

20. Principals generally refused to comment on whether or not the total amount of integration in Calgary schools should be increased. They stated that they were not familiar with the activities of other schools, and that they could comment only on their own schools. Some individuals stated that no attempt should be made to increase integration without determination of philosophy and goals. Others felt that determination of acceptable levels of integration revolves around provision of adequate resource support.

Opinions Concerning Current Services to the Handicapped

21. Principals unanimously reported being unaware of a statement of Board policy with respect to integration. To their knowledge, there is no written plan for implementation, no written statement of philosophy and goals, and no curriculum guidelines.

22. Principals generally supported the need for guidelines to give direction to integration activity.

23. Principals generally commended the services which the Board provided to handicapped students with severe conditions through the specialized institutions.

24. There was general support for the existence of special classes as a means of educating the moderately handicapped. A need is expressed for more special classes.

25. There was general agreement that the Board is not doing enough to meet the needs of the mildly handicapped. Students with mild learning difficulties who are presently located in regular classes are not being adequately assisted.

26. Principals were not agreed on the quality of service provided by the Special Education resource personnel. Some principals are very satisfied, while others mentioned serious understaffing and an apparent lack of concern and communication from the central offices. There was some concern that some special education services are spread so thinly that their value has been seriously compromised.

H. Summary of Interview Data from Regular Teachers

What is the impact of integration? To what extent has integration of handicapped children been implemented in the Calgary Public School System, and what changes should be instituted?

Twenty-eight (28) regular teachers were interviewed. Teachers were selected from a larger group identified by principals as teachers who were currently teaching handicapped students in their classrooms. Full reporting of results is provided in supporting Report #6: Regular Teachers.

Background of Teachers Interviewed

1. Of 28 regular teachers selected to work with handicapped students, eight had received either in-service training or university instruction in working with handicapped children.

2. The majority (68%) had more than five years of teaching experience.

3. Teachers stated that, if there was a reason for selecting them to teach handicapped students, it was that they had expressed an interest or that timetabling considerations determined the choice.

Nature and Extent of Integration

4. Most teachers reported making no major special arrangements for their handicapped students. Minor changes such as more instructional assistance, smaller projects, demanding less, etc., are common.

Assessment and Placement Procedures

5. Half the teachers stated that they were personally familiar with the assessment and placement procedures. Almost all expressed dissatisfaction. Concerns mentioned were: staff overload which means long waiting periods and some borderline children who are never referred at all; not enough openings for special placement; inconsistencies in communicating information.

Effects on Handicapped Students

6. Teachers rated the regular class as an effective placement for the great majority of handicapped students in the social and expressive areas. For some students, the regular class is felt to be inferior in capacity to teach the basic reading, writing and arithmetic academic skills.

Effects on the Non-Handicapped Students

7. Teachers reported little evidence of teasing and taunting from the non-handicapped students.

8. All teachers but three reported observing evidence of increased understanding, awareness and consideration in their non-handicapped students.

9. More than half of the teachers (60%) state that there have been no general detrimental effects on the non-handicapped students as a result of the presence of the handicapped. The exceptions to the above statement were teachers who had taught an emotionally disturbed, immature or aggressive child who became a disturbance to the class.

10. Slightly less than half (43%) of the teachers said that the presence of handicapped students had reduced the instruction time or attention paid to the non-handicapped students.

Effects on the Regular Teacher

11. Slightly more than half (57%) of the teachers found the teaching of handicapped students to be a positive experience. Reasons given generally focussed on the handicapped child's desire to succeed, his/her receptivity to being taught, and the pleasurable feelings which resulted when progress became visible.

12. A smaller number (32%) found the teaching of handicapped students to be a negative experience. Reasons given included physical fatigue, stress from having to move at an extremely slow pace, and the feeling that the non-handicapped students were being deprived of legitimate instruction time.

13. A few teachers (11%) found that teaching handicapped students was no different from teaching any other student.

14. The majority of teachers have modified their teaching methods to some extent as a result of the presence of handicapped children. Common examples were design of low-achieving curriculum, redistribution of attention time and extra assistance given to some pupils.

15. Half the teachers stated that the presence of handicapped children in their classes had helped them to identify other children with mild learning problems. Reasons given were generally that the teachers' own awareness of his/her pupils had been heightened. The remaining half of the teachers stated that this effect had not occurred.

16. The majority of teachers (71%) stated that the number of referrals from their classroom had not changed as a result of the presence of handicapped children. Reasons usually given were concerned with the lack of an adequate referral system. Mildly handicapped students are generally not referred, even if the teacher is aware of a difficulty.

Resources to Support Integration

17. The majority of teachers (69%) indicated that they were not provided with any additional resources to teach handicapped students. All but two of these stated that they did not need any additional resources.

18. Where resources were provided, they consisted of resource tutors, extra aides, smaller classes, adult volunteers and teacher aides.

19. Resources which would have been useful included more library materials, conferences, university courses and more preparation time.

20. Teachers stated that small class size, teacher and parent attitudes all contribute to successful integration.

21. Lack of information about the student, too large a class, lack of parental support and lack of teacher approval all cause difficulties for integration.

Desired Levels of Integration

22. Most teachers stated that they would not want to teach more than two to five handicapped children in a single class. The largest number selected by any teacher interviewed was one-quarter to one-fifth of the class.

23. Only two teachers replied with a clear "Yes" when asked if the amount of integration in Calgary schools should be increased. The others all provided either negative or qualified, conditional answers, where the answer depended upon type of handicap and level of resource support available.

24. Most teachers did not wish to teach emotionally disturbed children who would be disruptive to the class; severely retarded children; or those with severe discipline or physical problems. They felt that extensive teacher training would be required to teach such children competently.

25. If integration is increased, almost all teachers list class size as the most important consideration. Several teachers mentioned that teachers themselves would like to be consulted during planning and preparation for integration.

I. Summary of Interview Data with Special Education Teachers

What is the impact of integration? To what extent has integration of handicapped children been implemented in the Calgary Public School System, and what changes should be instituted?

Twenty-five (25) teachers of special classes were interviewed. Teachers were located in different schools. Where there was more than one special class in a school, random selections were made. For complete reporting of results, see supporting Report #7: Special Education Teachers.

Nature and Extent of Integration

1. Special class teachers reported that their students almost always take part, as an entire class block, in non-instructional activities such as recess, assemblies and concerts. Field trips may or may not be attended, depending on the particular situation. Most students participate on an integrated basis in activities such as art, physical education and music. Integration for these subjects is often determined by assessment of emotional/social behaviour. Some integration into academic subjects, on an individual basis, is carried out.

2. Some special class teachers stated that more integration would be practised in their schools if the regular classes were not so large.

3. In some schools, reverse integration is practised whereby regular students come into the special class for selected subjects.

4. It is reported that the students in the trainable mentally handicapped transitional classes generally integrate very little for instructional types of activity.

5. Most schools were said to make some sort of timetabling arrangements to integrate the special class students. Often, special class teachers accept teaching assignments with the regular students in return for integrated time for the special class students. In a few cases, no particular arrangements are made for the special classes, and the special class teacher works to accommodate himself/herself to the regular schedule.

6. Teachers observed that differing lunch-hour arrangements (special class students eat at school, regular students go home), and differing dismissal times (3:00 p.m. for the special class, 3:30 for the regular classes) constitute obstacles to successful playground integration.

Effects on Handicapped Students

7. The majority (68%) of special class teachers reported that their pupils feel as though they belong to the school which they attend. Some of these commented that the special classroom serves as a home base to the children, but they still feel a part of the school.

A minority (32%) of special class teachers reported that their pupils do not feel as though they belong to the school. Reasons mentioned were usually the bussing and scheduling differences of the special class. However, some mentioned that physical abnormalities can create difficulties in social acceptance, which removes any sense of belonging.

8. Special class placement was generally rated as effective by special teachers for almost all areas of general development of their students. For about one-quarter of the students, special class placement was not seen as effective for the basic skill areas (reading, writing, arithmetic).

Effects on the Non-Handicapped Students

9. Observations regarding social acceptance of the handicapped by the non-handicapped were mixed. It would appear that there is fairly general acceptance of the handicapped with discrete exceptions. The exceptions tend to be the physically disfigured or those whose behaviour is very different. Two teachers mentioned that the learning disabled students are accepted more readily than are the educably mentally handicapped.

10. According to the special class teachers interviewed, there is some evidence of both teasing behaviour and positive, caring behaviour on the part of the non-handicapped students. Neither is very frequent, and both can also be found among the special class children and among the non-handicapped. In some cases, the special class children are avoided; in others, they are accepted as members of the group.

Respondents noted that the attitudes of non-handicapped students towards the handicapped are not manifested in consistent behaviour patterns. In some cases, the non-handicapped tend to ignore the handicapped students altogether.

11. Special class teachers reported that integration does provide opportunity for the non-handicapped to learn to accept a wide variety of differences in people.

Effects on Regular Teachers

12. The majority (76%) of special class teachers said that regular teachers do not use them for consultation concerning their regular students. When consultation does take place, it is usually in the form of casual staff-room discussion.

13. Two benefits to regular teachers resulting from the presence of special classes were identified. Discipline problem students can be sent to the special classroom in order to relieve the regular teacher and to provide the child with one-to-one instructional attention. Through observing the achievement standards and behaviours of the special class students, regular teachers are provided with an opportunity to gain perspective on their own students.

Assessment and Placement Procedures

14. Half the special class teachers thought that the Board's assessment and placement procedures were adequate, and half thought that they were inadequate. Problems mentioned were: testing done by consultants who are strangers to the children; lack of reassessment of original placement; students are not assessed until they are eight years of age; lack of case conferences.

Desired Levels of Integration

15. The special class teachers were generally in favour of selective integration, i.e. they stated that level of integration should always be determined on a case-by-case basis.

16. There was general support for the retention of segregated institutions and of special classes for those who will continue to need them.

17. There was general agreement that integration of the severely mentally, emotionally and physically handicapped is not advisable.

18. Special class teachers stated that student placement should be evaluated according to social/emotional adjustment, academic ability, physical size and chronological age.

19. If integration into regular classes is increased, the most important considerations, according to the special class teachers, are: more planning time, smaller class size, better teaching training, individual student programming and careful student placement.

20. Most of the special class teachers supported the placement of the special classes for the moderately handicapped within

regular schools. The social benefits to the students were seen as justification for the effort involved.

21. Most of the special class teachers interviewed favoured a form of partial integration for the moderately handicapped, whereby a special class or a resource centre can provide part-time specialized instruction.

22. According to the teachers interviewed, if the amount of integration is increased, it will be important for school administration to serve two functions: provision of moral support, backing, knowledge and understanding; and provision of a liaison between the school and central administration, and between the school and its surrounding community.

23. Factors most frequently mentioned as likely to promote integration success are a positive teacher attitude, careful placement of the student, and teacher skill in dealing with the handicapped.

24. The factor most frequently mentioned as likely to cause difficulty with successful integration is negative attitude on the part of the regular teacher.

J. Summary of Interview Data with Handicapped Students and Their Parents

What impact would integration have on the handicapped child in the regular school or classroom?

Thirty-three parents, (father, mother or both), of handicapped students were interviewed. Students were all registered in a special class. All types of special classes were represented during the selection process. Where it was feasible, the student was interviewed as well. Twenty-five (25) students were interviewed. Complete report of results is found in supporting Report #9: Handicapped Students and their Parents.

Effects on Handicapped Students, As Reported by Parents

1. Parents of students in special classes reported that their children's liking for school is determined largely by whether they have a good teacher, and whether they can stay with the same group of friends over a period of years. They noted that the latter could be achieved either by placement in the neighbourhood school, or by a special class which stays together.

2. Parents of special class students who would otherwise be in regular classes (educable mentally handicapped) spoke of the advantages of the small class size and individual attention in the special class. Most parents observed improvement when their child was moved from a regular to a special class. Frustration decreased as the child began to experience success by working at his/her own level, and to find a group of which he/she could be a part.

3. Parents of special class students who would otherwise be in segregated institutions (the trainable mentally handicapped, the hearing and vision impaired) spoke of the advantages to their children of being able to mingle with regular students while at the same time receiving the specialized attention which they need.

4. Only three parents were aware of teasing and name-calling directed towards their children.

5. Some parents mentioned the disadvantage of a long bus ride, but it is seen as a secondary issue compared to the quality of the educational program. For a few parents, school transportation is welcomed as it relieves them of the need to transport the children themselves.

6. Parents report that school arrangements do have some influence on friendship patterns of the child, but type of handicap

and age of child are at least as important. The sensory impaired and trainable children tend to make friends among children with similar handicaps. The learning disabled children often have difficulty forming friendships in any setting. The educable mentally handicapped tended to have wider circles of friends, depending on the age of the child. For this latter group of children, being transported to school does create difficulty in forming friendship patterns.

7. The majority (73%) of parents of special class students considered that the schools are helping to prepare their child "... to live a productive adult life suited to his/her capabilities." Of the remainder, 15% feel that the schools are not being helpful, and 12% state that they do not know.

Preferred Form of Placement for Child

8. The majority (76%) of parents considered some form of partially integrated special class to be the preferred form of placement for their child.

9. Most parents selected a preferred form of placement similar to the one in which their child is presently enrolled.

Desired Levels of Integration

10. Most parents stated that they were not familiar with the education of handicapped children other than their own child.

11. Most parents said that they see numerous advantages to integration. They were concerned, however, that the advantages available in specialized settings not be lost to integrated students.

Assessment and Placement Procedures

12. Half the parents were able to remember assessments of their child taking place at reasonably regular intervals. Reports of frequency of assessment ranged from "once in school history" to "every six months."

13. Two-thirds of the parents had been involved in assessment procedures on at least one occasion. The other one-third either had not been involved or could not remember.

14. Very few parents had ever been involved in a disagreement over assessment and placement decisions, and these disagreements were usually resolved after appropriate discussion.

15. Among parents who had been involved with assessment procedures, there is general satisfaction with the procedures, with some

exceptions. Slow procedures were criticized in several cases. Parents of the physically handicapped sometimes have difficulty relating the results of assessment to school progress.

Effects on Handicapped Students, as Reported by the Students

16. The limited verbal ability of many special class students created difficulties for the research staff in discussing their school situations with them.

17. The special class students almost all said that they liked to be in school. Much of what they said they are learning relates to basic skills. Preferred activities tended to be "fun" subjects rather than the "hard" ones such as arithmetic. Most of the children said that they have friends in their own class, and that they do not have troubles getting along with other children. However, about half the students said they would like to move to a different school where there would be new people and former friends. Some students (about 15%) did mention teasing and other children fighting. Five of the students would prefer to be in a regular class.

18. Findings from the students, while very tentative, tend to confirm the opinions of their parents. The students are happy as long as they are finding satisfaction in their school work and they have a group of friends to whom they can relate.

CONCLUSIONS, COMMENDATIONS AND RECOMMENDATIONS

This research study has considered the problem of integration of handicapped students in the regular schools of the Calgary Board of Education from ten perspectives: (1) a review of relevant literature; (2) an analysis of integration as practised by five Canadian school districts comparable to the Calgary Public School System; (3) a description of how 26 local representatives defined the integration problem within the Calgary system; (4) a summary of statistical and descriptive data obtained from Calgary administrative records; (5) a compilation of responses to a self-study questionnaire completed by 29 of 31 regular schools randomly selected from Calgary public elementary, junior high and senior high schools; (6) a summary of teacher recordings of student behaviours in these schools; and (7) - (10) a combination of the interview comments of selected representatives of Calgary principals, teachers of regular classes, teachers of special education classes, parents of handicapped children and some handicapped students themselves.

These ten data sources have produced a comprehensive set of findings. By analysing these results in terms of their consistencies or inconsistencies, any reviewer of this report can arrive at conclusions and derive recommendations compatible with his or her set of values. The conclusions and recommendations presented in this chapter have been limited to those which can produce practical action within the next two years. Specific topics which are not discussed in this chapter may be examined by reference to the appropriate subheadings in the preceding RESULTS chapter.

Recommendations have been formulated on the basis of feasibility but also on the basis of desirability. This study was designed to gather data from multiple sources in the hopes of discovering consistent patterns upon which the Calgary Board of Education could make timely decisions affecting the future integration of handicapped students in its schools. Consistencies and trends have emerged in the data. The findings produced by examination of relevant literature were confirmed in the problem analysis interviews with Calgary school and community representatives. Topics of concern mentioned by the representatives of the five other Canadian school systems were mentioned in Calgary interviews with principals, regular teachers and special education teachers. Opinions concerning desired levels of integration are similar from one Calgary population to another. The recommendations to follow are based on considerable consistency of opinion from all data sources.

Another aspect of the integration question should be mentioned. It became evident during the course of the research study that the integration of handicapped students is an issue which can elicit

strong emotional feelings. Objective discussion is sometimes difficult to achieve. Personal difficulties in dealing with handicapped persons were not the original concern of this study. Nonetheless, they are encountered in some individuals, and the desire to help and be of service can conflict with personal difficulties in actually carrying out such activities. Opinions regarding appropriate levels of societal responsibility and of proper school function also enter into integration discussion. A further issue which colours such discussion with principals and teachers is that of professional roles and responsibilities of teaching staff. Integration is not generally viewed as a single issue by teachers and principals. It is part of the larger question of professional rights and abilities to influence the composition of their jobs. To some teachers, integration means only the possibility of more work, with no choice of acceptance or refusal and without adequate back-up support. The study design, through accepting the reality of such feelings and opinions, attempted to validate the factors which engendered them. The conclusions and recommendations presented in the remainder of this chapter outline systematic steps which should assist the Calgary Board of Education to constructively and effectively resolve critical integration issues.

The conclusions, commendations and recommendations are organized according to six headings. Each heading represents an area which was considered to need attention. Where there is more than one recommendation addressed to an area, these are grouped to indicate their relatedness. Commendations and recommendations are typed in capital letters, and are preceded by relevant conclusions. Where discussion is required, it is printed in regular type following the conclusion or recommendation. Statements of commendation have been included to provide specific mention of the Board's present accomplishments in providing appropriate educational programming for handicapped persons.

The six need areas identified within the recommendations are as follows:

Need for Board Leadership and Development

Need for Individualized Planning for Integrated Students

Need for a Longitudinal Impact Study

Need for Demonstration Schools

Need for Improved Strategy in all Schools with Integrated Handicapped Students

Need for Continued Board Support of Special Education Services, and of Integrated Education

A. Need for Board Leadership and Development

Conclusions, commendations and recommendations in this section address both the achievements of the Board to date in implementing integrated educational programming, and the need for continued Board leadership and development.

Conclusion 1: The Calgary Board of Education has documented its intentions to implement seven levels of an adapted Cascade model for the integration of handicapped students. Eligible students have been placed at all levels of the model.

Conclusion 2: The Board has not adopted a formal comprehensive statement of policy on integration.

Conclusion 3: Board administration has prepared partial statements of goals and objectives for integration. Complete statements of philosophy, rationale and implementation guidelines have not been developed.

The Board has not adopted an official policy statement concerning integration. Activity which has been sanctioned to date has been mandated by motion. A paper prepared by the administration in April 1976 provides some statements of goals and objectives, but does not relate the goals and objectives to statements of philosophy and rationale. A further paper prepared in January 1978 describes current levels of integration activity, but does not provide statements of rationale, goals and objectives. The January 1978 paper describes the adapted Cascade model currently in use in Calgary. Levels in place are the regular classroom, the regular classroom with specialized instruction, part-time special class, full-time special class, special stations, homebound and residential/non-educational.

Conclusion 4: Services, defined as numbers of programs in support of both integrated and segregated education of the handicapped, provided by the Calgary Board of Education are at least as numerous as those in any of five other Canadian school systems of similar size.

Comparisons of actual numbers of students served within programs could not be made from the data obtained for the study. However, the range of services provided by the Calgary Board is at least as wide as that provided by any of five other school systems studied. There was only one service mentioned by any of the five systems which is not provided in some form in Calgary, and this was a small, segregated program for high-school students.

COMMENDATION 1: THAT RECOGNITION BE GIVEN TO THE BOARD FOR ITS ACCOMPLISHMENT TO DATE IN PROVIDING A VARIETY OF FORMS OF SPECIALIZED INSTRUCTION FOR STUDENTS WITH HANDICAPPING CONDITIONS.

COMMENDATION 2: THAT RECOGNITION BE GIVEN TO THE BOARD FOR ITS ACCOMPLISHMENT TO DATE IN ADOPTING AND IMPLEMENTING THE CURRENT CALGARY APPLICATION OF THE CASCADE MODEL.

Conclusion 5: Calgary principals are generally agreed that a set of implementation guidelines for integration of handicapped students would be useful to them.

Principals, where they have handicapped students within their schools, generally attempt to make provision for integrated education. In the absence of a detailed set of directives from central offices, principals have worked within their own situations with the resources available to them. Principals agree that they could make use of suggested guidelines for integration, if only to ensure that their directives are in line with Board thinking on the topic. Statements of Board policy concerning desired levels of integration would remove some of the ambiguity surrounding the entire topic.

RECOMMENDATION 1: THAT THE BOARD DEVELOP AND ADOPT (1) A COMPREHENSIVE STATEMENT OF POLICY; (2) A STATEMENT OF PHILOSOPHY, RATIONALE, GOALS AND OBJECTIVES; AND (3) A SET OF IMPLEMENTATION GUIDELINES FOR THE INTEGRATED EDUCATION OF HANDICAPPED STUDENTS AT ALL ACADEMIC LEVELS IN THE CALGARY SYSTEM.

The recommended documentation should be developed in consultation with Board trustees, selected teachers, school administrators and parents experienced in the integration of handicapped students.

The documentation should address topics such as the following:

- Philosophy and human development theory on which Calgary's approach to integration is based.
- Definitions of handicapping conditions in terms of the competencies and educational needs of the students who possess them.
- Assessment criteria for identifying handicapped students and determining the type and amount of their handicapping conditions.
- Assessment procedures and instruments.

- Levels of integrated activity, possibly according to a modified Cascade model.
- Models of resource support which will be provided at each level.
- Criteria for student placement within levels, and for movement from one level to another.
- Coordination of integration philosophy and practice across academic levels, and between schools in the same academic level.
- Criteria or decision rules for helping individual handicapped students and their parents work with school staff to select appropriate educational experiences.
- Policies regarding transferring students from one school setting to another.
- Definition of role responsibilities for teachers of regular classes, principals, specialized teaching personnel, and central office special education personnel.
- Qualifications and training requirements for teachers, principals, specialized teaching personnel, and central office special education personnel.
- Delineation of central office and local school responsibilities as well as those of community agencies.
- Funding policies in support of integration activities.

The recommended documentation should be updated at least every other year. Initially, the documentation will have to be formulated on the basis of expert opinion without extensive empirical support for some key issues. Recommendations to follow assert the need for prototype models of integrated school resource provision and for longitudinal study to follow up integration practice. If these recommendations are implemented, information on the results of various forms of integration practice will become available within two years. Revisions of the recommended documentation should reflect the knowledge derived from the prototype models.

RECOMMENDATION 2: THAT A DISSEMINATION PLAN BE DEVELOPED TO ENSURE THAT THE DOCUMENTATION SUGGESTED IN RECOMMENDATION #1 IS AVAILABLE TO ALL INTERESTED PERSONS, INCLUDING REPRESENTATIVES OF THE MAIN DECISION-MAKING GROUPS INVOLVED WITH INTEGRATION IN CALGARY SCHOOLS.

RECOMMENDATION 3: THAT ORIENTATION MEETINGS AND TRAINING SESSIONS BE CONDUCTED WITH RESOURCE STAFF, SCHOOL ADMINISTRATORS AND COMMUNITY REPRESENTATIVES WHO WILL BE RESPONSIBLE FOR ORIENTING OTHER PERSONS TO THE CONTENT OF THE DOCUMENTS SUGGESTED IN RECOMMENDATION #1.

Attitudes of persons involved with integration have been identified in several places in the data as one of the most important determinants to success of integration activity. To achieve maximum effectiveness, the written documentation suggested in Recommendation #1 will need to be accompanied by verbal presentation and explanation. Orientation meetings and training sessions will assist in promoting an accurate and consistent dissemination of information throughout the school system.

B. Need for Individualized Planning for Integrated Students

Conclusions and recommendations in this section are based on the recognition that handicapped students generally require individualized learning programs different from the programs typically followed by their non-handicapped peers. If integration is to be successful, the resources to accomplish individualized instruction for the handicapped must be put into place. The first step towards appropriate resource provision is to construct an adequate operational definition of "handicapped."

Conclusion 6: Numbers of handicapped students identified by teachers and principals using the study definition of "handicapped" are estimated at 17% of the total regular school population. Estimates at the elementary levels range between 10%-15%. Estimates at the secondary level are higher, and range upwards of 20%.

Handicapped was defined in this study as "...requires a modification in regular school practices in order to develop to maximum capacity." Casual estimates by principals, more exact counts of pupils with specific, categorized handicaps and behaviour records produced by teachers all corresponded to produce an estimate of 10%-15% of the elementary population as handicapped. Close inspection of the data indicates that 11%-12% is probably the most accurate figure. Estimates provided by principals at the secondary levels were higher, with an average of 26% of junior high enrollment and 19% of senior high enrollment reported as handicapped.

Conclusion 7: Numbers of handicapped students identified by teachers and principals using the study definition of "handicapped" are greater than the numbers of students served by special education programs. There is a residual group of school-defined handicapped students who do not fall under central Board programs. This group is estimated to number about 3% of the elementary school population and about 17% of the secondary school population.

Principals report that less than half (39%) of the handicaps mentioned in Conclusion 6 have been assessed by Student Services for the purpose of declaring eligibility for a special education program. The remainder of the handicaps have been identified by means developed within the individual schools. The large majority of the non-assisted handicapped students (60%) are located at the secondary levels, with the remainder (40%) located within the elementary grades.

Conclusion 8: Handicapped students who are not receiving assistance from central special education programs are generally described as having mild learning/behavioural/cultural/emotional/discipline problems.

Principals mention that there seem to be growing numbers of students who exhibit mild learning and/or behaviour problems. Such students are usually outside the range of the centralized services provided by the Board. The majority of centralized special education services are provided for the benefit of the elementary grades.

COMMENDATION 3: THAT RECOGNITION BE GIVEN TO THE BOARD FOR PROVIDING VARIOUS FORMS OF SPECIAL EDUCATION RESOURCE SERVICES TO APPROXIMATELY EIGHT (8) PER CENT OF THE ELEMENTARY SCHOOL POPULATION.

RECOMMENDATION 4: THAT THE BOARD AUTHORIZE ACTIVITY TO DEVELOP AND APPROVE DEFINITIONS OF HANDICAPPED STUDENTS AND HANDICAPPING CONDITIONS THAT MODIFY THE CATEGORIES CURRENTLY USED TO IDENTIFY STUDENTS FOR GRANT PURPOSES.

The conclusions presented above indicate that the definitions of "handicap" currently used by the Board are not covering the total range of students whom teachers define as handicapped. Further, the review of literature substantiates well how the currently accepted categories of handicapped students (e.g., intellectually handicapped, learning disabled, socially maladjusted, language deficit) focus on student disabilities, and tend to be negative labels. These conventional terms based on a medical diagnostic model do not facilitate decision-making about the nature and degree of a student's handicapping condition, the competencies she/he possesses, her/his educational needs, or educational experiences appropriate to those needs.

It is strongly recommended that the Board explore the possibilities of developing definitions based on students' actual and desired competencies. Such an approach would be consistent with the development of the Screening Checklist of Student Behaviours constructed for and used in this study. Definitions should specifically define behaviours that constitute categories such as the three used in this study: mild, moderate and severe handicapping conditions. In this study, definitions were of necessity, limited to description of the three categories by the type of educational settings appropriate for handicapped students. Lack of suitable frameworks prevented use of definitions which described the behaviours, competencies and characteristics of the students themselves.

The Board should recognize that, if it modifies the conventional labels to ones more conducive to educational diagnosis and program planning, the road will be opened to increased numbers of students being formally assessed as "handicapped" and therefore in need of specialized learning assistance. In addition, the issue of the relation of local Board definitions to those required by provincial grant regulations must be considered. However, by resolving this issue, the Board will make explicit its intents and goals in the area of integrating handicapped students.

RECOMMENDATION 5: THAT CAREFUL REVIEW AND VALIDATION BE MADE OF INSTRUMENTS SUCH AS THE STUDY'S SCREENING CHECKLIST OF STUDENT BEHAVIOURS THAT CAN BE USED BY TEACHERS AND OTHER KNOWLEDGEABLE STAFF TO IDENTIFY AND ASSESS STUDENTS WITH POSSIBLE HANDICAPPING CONDITIONS.

The Checklist and other such instruments have been developed to help teachers identify students who have handicapping conditions that either limit their competencies in some ways, or provide them with additional competencies in other areas. The reliability and validity of these instruments need to be closely investigated. If one or more of them prove to be effective, they can be adopted as an efficient initial screening technique for expediting the identification of students who have special needs.

RECOMMENDATION 6: IF RECOMMENDATION 4 IS IMPLEMENTED, AND NEW DEFINITIONS ARE ESTABLISHED, THAT A SIMILAR REVIEW BE MADE OF ASSESSMENT PROCEDURES AND INSTRUMENTS CURRENTLY USED IN CENTRALIZED STUDENT ASSESSMENTS. THIS REVIEW SHOULD ENSURE THAT: (1) THOSE ASSESSMENT STRATEGIES ARE COMPATIBLE WITH THE REVISED DEFINITIONS, AND (2) THEY ARE AS EFFICIENT AS POSSIBLE IN ORDER TO EXPEDITE THE ENTIRE DIAGNOSIS/PLACEMENT/PROGRAMMING PROCESS.

If the Board modifies the definitions of "handicapped" currently in use, it is highly probable that changes in procedures for assessing handicapping conditions will be required. Procedures should be examined for efficiency as well as definitional validity, in order to ensure optimum use of a key resource in the integration process.

RECOMMENDATION 7: IF THE DEFINITIONS OF HANDICAPPED STUDENTS AND HANDICAPPING CONDITIONS ARE MODIFIED AND IMPROVEMENTS ARE MADE IN THE STUDENT IDENTIFICATION AND DIAGNOSTIC PROCESS, THAT THE BOARD APPROVE THE SPECIFICATION OF (1) EDUCATIONAL METHODS AND RESOURCES (E.G., EQUIPMENT, MATERIALS) APPROPRIATE TO THE MAIN EDUCATIONAL NEEDS OF HANDICAPPED STUDENTS; (2) PROCEDURES BY WHICH PARENTS AND THEIR HANDICAPPED STUDENTS CAN PARTICIPATE WITH SCHOOL STAFF IN PLANNING PERSONALIZED EDUCATIONAL PROGRAMS; AND (3) PROCEDURES BY WHICH THEY CAN MONITOR THE EDUCATIONAL PROGRESS OF THOSE STUDENTS.

The preceding recommendations addressed the need for improved identification and diagnosis of handicapped students. One purpose of those suggestions is to provide information that will facilitate the development, implementation, and progress monitoring of an individualized educational plan for each handicapped student. Wherever possible, the parents and the student should be involved in the planning and monitoring process. Team planning should be initiated to include at least the teacher who will be accepting the student in an integrated setting. Just who the other team members should be, what resources would be available to the team, and what procedures should be used must be resolved. More specific suggestions on resource provision and planning are provided in a later section of the recommendations.

Part of the rationale behind recommending this individualized approach to planning and monitoring handicapped students' programs stems from a belief that integration should not be regarded as a desirable end state, to be achieved for its own sake. It should be regarded as a means to an end where the end desired is a productive educational experience for a handicapped student. In some cases, integration may not be productive, and it should not be forced under these circumstances. A highly individualized planning procedure conducted by a team approach can be an effective means of preventing a misplacement.

C. Need for a Longitudinal Impact Study

The recommendation in this section addresses the need to begin procedures to gather long-range evidence of the impact of integration.

Conclusion 9: The literature does not provide definitive conclusions concerning the absolute superiority of any type of placement setting for the education of handicapped children.

Conclusion 10: There is virtually no evidence concerning the long-range effects of integration.

There is a general lack of definitive evidence in the research literature concerning effects of integration. Difficulties in finding appropriate research instruments, and difficulties in measurement and definition of all relevant controlling factors, combine to create problems with consistent interpretation of research findings. Further, there is no quantitative, objective data available on the integrated students of Calgary and on their families. Anecdotal reports of opinion data would indicate that integration is seen as favourable, but no firm evidence exists to confirm these impressions.

RECOMMENDATION 8: THAT A SYSTEMATIC STUDY BE DESIGNED TO ASSESS STUDENT AND FAMILY OUTCOMES EXPERIENCED BY A REPRESENTATIVE SAMPLE OF MODERATELY AND SEVERELY HANDICAPPED INDIVIDUALS WHO HAVE BEEN PLACED IN INTEGRATED SETTINGS. COMPARISONS SHOULD BE MADE TO A SIMILAR GROUP WHICH HAVE NOT BEEN PLACED IN INTEGRATED SETTINGS, PROVIDED THAT SUFFICIENT COMPARABLE INDIVIDUALS CAN BE FOUND. SUCH A STUDY SHOULD BE VIEWED AS THE PRELIMINARY STAGE FOR A LONGITUDINAL INVESTIGATION OF INTEGRATION EFFECTS.

Studies in which the effects of integrated and segregated placements are compared have been immersed in methodological problems. These include selection bias; lack of comparable students in the two treatment groups; problems in establishing acceptable criteria for comparing student outcomes; and inadequate or inappropriate evaluation instruments for assessing student outcome attainment. With adequate preparation time, the problems of inadequate instruments for outcome assessment can be overcome. Design difficulties may still remain, depending on placement decisions adopted by the Board. Nonetheless, design of a comprehensive longitudinal study is a responsible action in light of the current dearth of information regarding the long-range effects of practices already in effect in Calgary and in many other settings. If school assessment records can be maintained in a

form suitable for research purposes, so that some relevant data is readily accessible to assess effects on students, then an efficient longitudinal study would not be prohibitively expensive.

D. Need for Demonstration Schools

The conclusions and recommendations in this section address the need to begin selective provision of additional resources for integration on a staggered, sequential basis.

Conclusion 11: The weight of opinion, from all data sources investigated in this study, is that integration is generally felt to be favourable if placement was appropriate and if adequate resource support was provided.

This finding must be interpreted in light of a background situation in Calgary in which level of integration for any individual student generally is case conferenced by several persons, and in which integration is practised with a relatively conservative bias. In other words, situations with a high probable perceived risk of failure tend to be avoided where resources make alternative forms of placement possible. For the majority of students in integrated placements in Calgary, informal observation reports successful outcome.

Conclusion 12: The majority of regular teachers interviewed who were presently teaching handicapped students found the experience to be either pleasurable or no different from teaching any other students. A significant minority (32%) found the experience negative and stressful. A similar percentage (43%) said that the presence of handicapped students in their class had reduced the instructor time given to the non-handicapped students.

The teachers who had enjoyed teaching handicapped students mentioned the general eagerness and receptivity of many of these children. When progress becomes visible with the student, it is a source of pleasure to the teacher. Those who found the experience unpleasant generally mention fatigue and stress caused by the need to move more slowly with the handicapped student, which in turn creates difficulty in providing appropriate instruction to the rest of the class.

Conclusion 13: Teaching staff, principals and teachers object to increased integration without provision of extra resources. Appropriate resources include: additional staff and/or decreased class size; regular planning and preparation time; special training and consultation; and adequate curriculum materials.

Conclusion 14: There was no general expression of need from Calgary schools for special equipment or architectural modifications to buildings beyond what has presently been provided. A few schools did indicate that they have requests which have not been satisfied. Three of these were for partitioning to provide "time-out" or resource space.

Conclusion 15: The special resource consultants most frequently used by the elementary schools are the Visiting Teacher, the School Psychologist and the Speech Pathologist. For each of these services, one-half or more of the schools studied report that the amount of service provided is not adequate to meet the needs of the school.

RECOMMENDATION 9: THAT THE IMPLEMENTATION OF IMPROVED RESOURCE SUPPORT FOR THE INTEGRATED EDUCATION OF HANDICAPPED CHILDREN PROCEED ON A WELL-PHASED, SCHOOL-BY-SCHOOL BASIS. THE BOARD SHOULD ALLOCATE FUNDS TO A FEW SELECTED SCHOOLS (PERHAPS IN ONE AREA). SCHOOLS SHOULD BE SELECTED ON THE BASIS OF RELATIVELY LARGE NUMBERS OF HANDICAPPED CURRENTLY IN PLACE, OR OF WILLINGNESS TO ACCEPT ADDITIONAL HANDICAPPED STUDENTS. FEEDER SYSTEMS TO SECONDARY SCHOOLS SHOULD BE CONSIDERED IN ELEMENTARY SCHOOL SELECTION. THESE SCHOOLS WOULD LATER SERVE AS MODELS OF SUCCESSFUL APPROACHES SO THAT OTHER CALGARY SCHOOLS COULD BUILD ON THEIR ATTEMPTS. A TOTAL SYSTEM APPROACH TO INTEGRATION IS NOT RECOMMENDED UNTIL SUCH MODELS HAVE BEEN IMPLEMENTED AND EVALUATED AND ARE AVAILABLE TO SERVE AS DEMONSTRATION SITES.

Numbers and types of handicapped pupils vary from school to school, and within schools from year to year. The need is greater in some settings than in others. A phased implementation approach will allow the Board time to assess results and correct mistakes in progress. Authorities with experience in integration seem to agree that changes must be made slowly, with considerable advance preparation. Time must be allowed for all parties involved to fully explore opinions and attitudes.

Further, it should be recognized that successful integration depends on school organization and participation, as well as a basic classroom organization and participation. In a school which has integrated classrooms, administrators must make scheduling and resource allocation decisions, other teachers must assist on the playground, etc. The school is the logical unit of approach in beginning attempts to improve integrated education.

RECOMMENDATION 10: THAT THE BOARD DESIGN IMPROVED RESOURCE SUPPORT FOR THE INTEGRATED EDUCATION OF HANDICAPPED CHILDREN WITH REFERENCE TO THE FOLLOWING MODEL (SEE PAGE 58).

Cascade Levels	Instructional and/or Programming Authority	Resource Supports to Classroom
Regular Classroom, no handicapped students		1. In-service on diagnosis and assessment.
LEVEL I: Regular Class, no instructional assistance	Regular Teacher	
LEVEL II-A: Regular Class, with instructional assistance	Regular Teacher and Resource Teacher	2. In-service on instructional methods, classroom management and use of resource personnel.
LEVEL II-B: Regular Class with highly specialized instructional assistance	Regular Teacher and Learning Assistance Centre Staff	3. Instructional materials. 4. Reduced class size.
LEVEL II-C: Regular Class, with assistance for sensory impaired students	Regular Teacher and Itinerant Teacher	5. Teacher aide. 6. School tutor.
LEVEL III: Special Class, part-time	Special Education Teacher	
LEVEL IV: Special Class, full-time	Special Education Teacher	
Successive levels: home-confined, residential		

The following notes will assist in interpretation of the model:

1. The model is constructed to conform to the levels listed in the Calgary adaptation of the Cascade model. The Levels in the left-hand column indicate student instructional placement, with placement always to the highest possible level.

2. The model does not indicate the presence of certain categories of specialized resource personnel currently employed by the

Board, i.e. the Visiting Teacher, the School Psychologist, the Speech Pathologist, the Attendance Officer and the Guidance Counsellor. It is assumed that these individuals would continue to fill their usual functions in the demonstration schools.

3. All resources listed in the table should be considered to be potentially available for any integrated classroom. Principals should be assisted to prepare needs assessments of the students and teachers in their schools in order to guide central administration in the distribution of resources between schools. Need for resources related to determination of Cascade level (i.e. the Resource Teacher, Learning Assistance Centre, Itinerant Teacher or Special Education Teacher) should be assessed on the basis of instructional requirements of the handicapped student(s). Need for resource supports to the regular classroom (i.e. in-service, materials, reduced class size, Teacher Aide or School Tutor) should be assessed on the basis of both instructional requirements of the handicapped student(s) and the ability of the regular teacher to manage the teaching of the entire class. It is expected that teachers and principals will normally make use of the resources sequentially, in the downward direction. Resources which are higher on the list will be used to full benefit before moving to resources lower on the list. However, there may be exceptional cases in which the usual order of resource use is reversed. The classroom resources are shown on the model as extending down from Cascade Level I to Cascade Level III. Regular teachers who receive the part-time special class students (Level III) may require resource support similar to that provided to teachers at Level I and Level II of the model.

4. The top line of the model "Regular Classroom, no handicapped students" was inserted to indicate that it is advisable for all teachers in the Calgary system to receive some in-service instruction on diagnosis and assessment of handicapped students. Unless there are unusual circumstances which determine otherwise, all schools with integrated classrooms are expected to require the second level of in-service (on instructional methods, classroom management and use of resource personnel) and special instructional materials. In-service should generally be regarded as a prerequisite to the right to accept handicapped children into the classroom.

5. Definitions of roles and responsibilities between all personnel in the model must be discussed and outlined. The issue of authority over the educational programming of the student must be addressed. For example, it is assumed that the regular teacher would assume authority over the teacher aide. Appropriate sharing of responsibility between the regular teacher and the resource teacher may require discussion. It is expected that the Resource Teacher, the Itinerant Teacher and the Learning Assistance Centre staff will fill two functions: provision of actual instruction to the students; and provision of consultative advice to the teacher. (The latter function

of consultation could classify them as a Level I resource; this classification was omitted from the model in order to simplify the presentation.

6. Teacher Aides, School Tutors, Resource Teachers and Learning Assistance Centre personnel form a hierarchy of increasing experience and increasing specialized competence. The Teacher Aide does not need a degree, but the other four types of personnel are assumed to have at least one degree. School Tutors and Resource Teachers can be created through intensive in-service training of exceptionally good teachers. Learning Assistance Centre staff generally require advanced university instruction in special education. Itinerant Teachers have received specialized instruction in teaching of students with particular disabilities. Teacher Aides, Resource Teachers, Itinerant Teachers and Learning Assistance Centre staff are defined by job functions similar to those in existence in Calgary at present. School Tutors are expected to work with students on a one-to-one or group basis, under the direction of the regular classroom teacher.

7. School Tutors and Resource Teachers may work within a single school, or be shared between two or more small schools. Learning Assistance Centre staff will draw pupils from several schools. Teacher Aides will normally be assigned on a shared basis to two or more classrooms. Itinerant Teachers will be assigned to specific pupils.

8. There will likely be some students with highly specialized needs who cannot be fitted into the Level I and/or Level II resource patterns shown in the model, e.g. physically handicapped students with a need for some form of specialized therapy. These students, when assisted by an appropriate resource, would be considered to be placed at an additional subcategory of Level II on the model.

9. Numbers and amounts of resource support required will vary with numbers of handicapped children in a class, and with the nature of the handicap. Precise specifications, based on empirical evidence, could not be obtained from the literature. A set of tentative numerical specifications has been developed for use in guiding the planning for the demonstration schools. These specifications are presented in the accompanying report on cost estimates. The experience accumulated by the demonstration schools over the next two years will assist in establishing the validity of the proposed specifications.

RECOMMENDATION 11: THAT PROVISION FOR ADEQUATE EVALUATION PROCEDURES BE INCLUDED IN THE DESIGN FOR THE DEMONSTRATION INTEGRATED SCHOOLS.

The experiences of the demonstration schools over the next two years should be systematically observed and recorded in order to influence the direction of integration activity in other schools. Observation should include reporting on at least the following topics: amount and nature of in-service required; in-school needs assessments; procedures for monitoring progress of the handicapped student; procedures for monitoring progress and behaviour of non-handicapped students; patterns of community reaction; patterns of resource usage; effectiveness of resources provided as related to numbers and particular disabilities of handicapped students; reactions of regular teachers. It is expected that the results of the experiences of these demonstration schools will influence content of the documentation described under Recommendation 1.

E. Need for Improved Strategy in all Schools with Integrated Handicapped Students

The conclusions and recommendations in this section address needs identified in schools which presently have numbers of handicapped integrated students.

Conclusion 16: Students in special classes located in regular schools are almost always integrated for non-instructional activities such as concerts and assemblies. Integration in instructional subjects such as art, music and physical education is common. Integration in the basic academic skill areas such as arithmetic is rare, but examples can be found.

Principals and special class teachers are consistent in their description of integrated activity of the special class students. Students are almost always integrated for the non-instructional activities such as concerts, assemblies, and recess time. Students are usually integrated into the expressive subjects such as art, music and physical education, unless the student's behaviour prevents such integration or unless the regular classes are already full. Integration into academic skill areas is practised occasionally when it seems likely that the student can benefit. Special class teachers frequently teach some subjects to regular students in return for integrated teaching time with their own students. Most schools, with a few exceptions, deliberately schedule to include the special class students in events wherever possible.

COMMENDATION 4: THAT RECOGNITION BE EXTENDED TO SPECIAL CLASS TEACHERS, REGULAR TEACHERS AND PRINCIPALS IN SCHOOLS WITH INTEGRATED SPECIAL CLASSES FOR THEIR ACCOMPLISHMENTS IN PARTIAL INTEGRATION OF THE SPECIAL CLASS STUDENTS.

Conclusion 17: Principals and regular teachers both state that, for the handicapped students located in regular classrooms, no special arrangements are made. Minor modifications such as lowering of expectations and change in distribution of instruction time are frequent.

A previous set of recommendations addressed the need for individualized programming for handicapped students. It would appear that Calgary teachers do in fact "individualize" programs through such actions as changing expectations of quality and quantity of work from the handicapped; providing additional instruction time where possible; and grouping students to accommodate the handicap. There is not,

however, an "individualized" program in the sense that each student's learning schedule is systematically designed and monitored by the school.

RECOMMENDATION 12: THAT SCHOOLS WHICH HAVE INTEGRATED HANDICAPPED STUDENTS BE ASSISTED TO DEVELOP INDIVIDUALIZED EDUCATIONAL PLANNING APPROACHES FOR THOSE STUDENTS, AND THAT INTERNAL MONITORING PROCESSES BE DEVELOPED TO ENSURE THAT (1) THE HANDICAPPED STUDENTS ARE PROGRESSING SATISFACTORILY; (2) THEIR NON-HANDICAPPED PEERS ARE ALSO PROGRESSING SATISFACTORILY; AND (3) THE NON-HANDICAPPED PEERS ARE NOT EXPERIENCING UNDESIRABLE SIDE EFFECTS.

Conclusion 18: Principals and teachers generally assert that integration has increased tolerance, understanding and awareness among their non-handicapped pupils. There is, however, continued evidence of some teasing, taunting and negative behaviours towards the handicapped pupils. Such behaviour is said to be relatively infrequent and does not reach a level which would prohibit integration.

RECOMMENDATION 13: THAT SCHOOLS INVOLVED IN INTEGRATION ACTIVITY CONSIDER IMPLEMENTING ORIENTATION AND READINESS PROGRAMS FOR STUDENTS SO THAT STUDENTS WILL BE BETTER ABLE TO INTERACT CONSTRUCTIVELY IN INTEGRATED INSTRUCTIONAL AND NON-INSTRUCTIONAL ACTIVITIES.

Systematic attitude change programs might possibly alleviate some of the social acceptance problems noted above. Printed materials and audiovisual resources currently available could be adapted or used without modification. Various educational authorities have developed a series of videotapes, films, and printed materials to provide young children with an informed understanding of their handicapped peers, and to promote constructive interaction between handicapped and non-handicapped students in integrated classrooms. Such materials could be purchased centrally and loaned to appropriate schools as required.

Conclusion 19: Principals report little reaction from the community, either positive or negative, to the presence of handicapped students in the school.

RECOMMENDATION 14: THAT SCHOOLS INCREASING EXTENT OF INTEGRATION BEYOND PRESENT LEVELS CONSIDER PRESENTING COMMUNITY ORIENTATION PROGRAMS AIMED AT PREVENTING NEGATIVE REACTIONS.

Conclusion 20: Most regular teachers interviewed who currently have handicapped students in their classrooms were selected either on a

basis unknown to them, or because they had requested the experience or through considerations of timetabling convenience.

Conclusion 21: Less than one-third of this group of regular teachers had ever received instruction in the teaching of handicapped children.

Conclusion 22: Most principals and teachers are in favour of integration of the mildly and moderately handicapped, if appropriate resource support is provided.

RECOMMENDATION 15: THAT SCHOOLS WHICH HAVE INTEGRATED HANDICAPPED STUDENTS BUT ARE NOT INCLUDED AMONG THE DEMONSTRATION MODEL SCHOOLS BE DIRECTED TO REQUEST IN-SERVICE TRAINING FOR THE PRINCIPAL AND THE TEACHERS OF THE INTEGRATED CLASSROOMS. THE IN-SERVICE SHOULD INCLUDE MATERIAL ON DIAGNOSIS, INSTRUCTIONAL PROCEDURES AND CLASSROOM MANAGEMENT. IN-SERVICE SHOULD BE DESIGNED TO MAKE MAXIMUM USE OF THE KNOWLEDGE ALREADY ACCUMULATED BY CALGARY TEACHERS AND PRINCIPALS IN THE AREA OF EDUCATION OF THE HANDICAPPED.

In the absence of firmer guidelines and increased resource support, such as those under development in the prototype demonstration models, in-service still can serve useful functions. It can provide a medium in which to share ideas and knowledge already gained; as a social system to provide support and backing; as an opportunity for central special education resource persons to dispense useful technical information; and as an opportunity to explain new procedures such as the individualized instructional monitoring systems described in a previous recommendation. It is suggested that the recommended in-service be organized by central resource staff, and be delivered on a zone basis with substitute release time arranged in the individual schools.

F. Need for Continued Board Support of Special Education Services, and of Integrated Education

Conclusions and recommendations in this section are addressed to the need for continued Board support of services, both integrated and segregated, to handicapped students.

Conclusion 23: The majority of all respondent groups interviewed in the study are in favour of integration for mildly and moderately handicapped students. Teachers and principals are generally opposed to the integration of children with severe emotional, physical or mental handicaps.

Conclusion 24: The weight of available opinion data tends to indicate that integrated learning experiences do provide social benefits to most handicapped students.

Conclusion 25: The weight of available opinion data tends to indicate that segregated learning experiences will always be required for some handicapped students.

Teachers and principals are generally willing to assume teaching responsibilities with most handicapped children if appropriate resource support is provided. This latter qualification must be stressed, as provision of appropriate resource support is almost always mentioned as an absolute requirement for successful integration. Most teachers and principals with integration experience speak favourably of benefits to students. However, teaching staff tend to oppose the integration of children with extreme handicapping conditions. It is felt that severely emotionally disturbed children could become too disruptive to a class, and that severely retarded children would become too isolated. Caring for the severely physically handicapped may be beyond regular class capacity, even with resource assistance.

RECOMMENDATION 16: THAT THE BOARD CONTINUE TO SUPPORT INTEGRATION OF HANDICAPPED STUDENTS TO THE MAXIMUM EXTENT POSSIBLE WHEN SUCH INTEGRATION ACTIVITIES ARE APPROPRIATE TO THE INDIVIDUAL EDUCATIONAL NEEDS OF EACH STUDENT.

RECOMMENDATION 17: THAT THE BOARD MAINTAIN EDUCATIONAL OPPORTUNITIES FOR STUDENTS AT ALL LEVELS OF THE CURRENT CASCADE MODEL. SPECIFICALLY, THERE SHOULD BE NO ATTEMPT, NOW OR IN THE LONG-RANGE, TO CLOSE DOWN THE SPECIAL CLASSES OR THE SEGREGATED INSTITUTIONS.

Recommendation 16 and Recommendation 17, in conjunction, suggest the retention of all educational structures presently maintained by the Board, together with the use of placement procedures which place individual students towards the regular classroom to the maximum extent possible. The recommendations are, in effect, a reaffirmation of the Cascade principle of educating according to the mainstream. The remainder of the recommendations are suggestions towards operational procedures to help accomplish optimal student placement.

Conclusion 26: The specialized resource personnel provided by Student Services are used by the large majority of schools. Reports of insufficient time to meet existing needs are frequent.

The visiting teacher service was used by all but one of the Calgary schools studied. Almost all the schools make use of the school psychologist and the speech pathologist. Frequent mention was received of the inability of these personnel to respond quickly and fully to all the students whom teaching staff would like to refer. Some principals have mentioned the need for additional student space in the Learning Assistance Centres and the special classes. At the secondary levels, all schools have guidance counsellors on at least a part-time basis. The guidance counselling service was generally rated as adequate in numbers to the task expected of it.

RECOMMENDATION 18: THAT THE BOARD CONTINUE TO PROVIDE ITS PRESENT COMPLEMENT OF SPECIALIZED RESOURCE PERSONNEL. SPECIFICALLY, THE CATEGORIES OF VISITING TEACHERS, PSYCHOLOGISTS, SPEECH PATHOLOGISTS, CLINICIANS AND TUTORS IN LEARNING ASSISTANCE CENTRES, GUIDANCE COUNSELLORS, ATTENDANCE OFFICERS AND SPECIAL EDUCATION TEACHERS, SHOULD BE MAINTAINED. SERVICES SPECIFICALLY DESIGNED FOR INTEGRATED CLASSROOMS SHOULD BE CONSIDERED AS ADDITIONAL TO THE ABOVE SERVICES.

Services specially designed for integrated classrooms generally have the function of assisting teachers to perform more competently in those settings, both as instructor to individual students, and as manager of a larger group of students. The services provided by the specialized resource personnel listed above, generally entail providing one-to-one assistance to individual students, or consultations with teachers about particular students. However, it is a reasonable expectation that changes to teaching patterns in the regular classroom will eventually produce changes in the patterns of referrals to central specialized resource personnel. If the proposed models of integrated education are successful in their intentions, then some of the need for referral to outside specialists may disappear altogether, while the typical relation of the outside consultant to the regular teacher may shift in a direction towards increased consulta-

tion with teachers rather than with students. The evaluation of the demonstration models suggested in Recommendation 11 should include consideration of referral patterns.

RECOMMENDATION 19: THAT THE BOARD UNDERTAKE AN INTERNAL REVIEW OF THE FUNCTIONS, REQUIRED COMPETENCIES AND ACTIVITIES OF ITS SPECIALIZED RESOURCE PERSONNEL. SPECIFICALLY, THE CATEGORIES OF VISITING TEACHER, SCHOOL PSYCHOLOGIST, SPEECH PATHOLOGIST, LEARNING ASSISTANCE CENTRE STAFF (CLINICIANS AND TUTORS), GUIDANCE COUNSELLORS, ATTENDANCE OFFICERS AND SPECIAL EDUCATION TEACHERS SHOULD BE EXAMINED FOR THEIR PRESENT AND PROJECTED RELATION TO INTEGRATED EDUCATION.

If the review suggested in Recommendation 19 is undertaken within the 1978/79 school year, decisions based on the review will be available for consideration in conjunction with the preliminary results on referral patterns from the demonstration models. Analysis of results from these two sources should allow the Board to make a well-informed decision concerning desirable numbers of specialized resource staff.

It is suggested that the review of special resource personnel include conversation with teachers and principals, in addition to the usual examination of statistical data and reports from the personnel themselves. The review should include consideration of (1) current functions of specialized personnel; (2) proposed functions, i.e. those which will and/or should emerge if integrated educational opportunities increase; (3) required competencies for performing the proposed functions; (4) training activities which would be required if upgrading is necessary; and (5) numbers of students/teachers/schools who can be assisted by each individual resource person, given the specified proposed functions.

RECOMMENDATION 20: THAT THE BOARD CONSIDER HIRING ADDITIONAL NUMBERS OF SPECIALIZED PERSONNEL AS AN INTERIM MEASURE FOR THE NEXT TWO YEARS. SPECIFICALLY, NUMBERS OF SPECIAL EDUCATION TEACHERS, VISITING TEACHERS, SCHOOL PSYCHOLOGISTS, SPEECH PATHOLOGISTS AND LEARNING ASSISTANCE CENTRE STAFF SHOULD BE INCREASED.

The planning measures suggested in other recommendations in this report should result in well-informed recommendations concerning functions and required numbers of specialized staff within two years. In the meantime, there is clear indication of needs in the school system which are not being met. Increases in centralized resource staff are recommended to increase system capacity to deal with present problems. At the same time, planning measures have been recommended to assist the system in dealing with these problems at a more fundamental level.

Attachment A

SUMMARY: A STUDY OF THE INTEGRATION OF HANDICAPPED STUDENTS IN THE REGULAR SCHOOLS OF THE CALGARY BOARD OF EDUCATION

1978 06 27

SUMMARY: A STUDY OF THE INTEGRATION OF HANDICAPPED STUDENTS IN THE REGULAR SCHOOLS OF THE CALGARY BOARD OF EDUCATION

Mr. Chairman, Members of the Board:

On behalf of the Canadian Institute for Research, I am pleased to present a summary of the major findings and the recommendations of the study on the integration of handicapped children into the regular schools of the Calgary Board of Education. We fully recognize the importance of the topic of integration to modern educational systems. We trust that our presentation of findings and our suggested recommendations will prove useful to the members of the Board as they consider the issues involved.

We are presenting tonight the results of a study which has extended over the past year (since June 1977). Information has been gathered and analyzed from a total of ten different data sources to arrive at final conclusions. Recommendations are addressed to a need to rationalize and plan for activities which are already partially in place, and to a need to extend service in some new directions.

BACKGROUND OF STUDY

This study was commissioned in June of 1977 to provide answers to 5 basic questions specified in the Terms of Reference:

Question #1: What impact does integration have? What are the effects of integration likely to be?

Question #2: What does the professional literature indicate about integration?

Question #3: To what extent has integration actually been implemented in Calgary? What changes should be instituted?

Question #4: What have other Canadian school systems similar in size to Calgary done with respect to integration? What have been the results of their activities?

Question #5: What would be the costs to the school system if integration were fully implemented?

The key terms "integration" and "handicapped" were not defined in the Request for Proposal. The Canadian Institute for Research, in collaboration with the study Steering Committee, decided to conduct a study of very broad scope by defining integration simply as "education of handicapped students in the regular schools of the Calgary Board of Education," and by defining handicapped as "one who requires modification in regular school practices in order to develop maximum capacity."

Data-collection procedures were designed to investigate integration using these basic definitions. The procedures included: (1) literature review; (2) survey of 5 other Canadian school systems; (3) interviews with various representatives of the educational and lay communities in Calgary; (4) analysis of statistical data from central administrative records; (5) questionnaire survey of integration practise in a random sample of elementary, junior high and senior high schools; (6) summary of teacher recordings of student behaviours in the random sample of schools; and (7) - (10) interviews on attitudes towards integration with selected Calgary principals, teachers of regular schools, teachers of special education classes, and parents of handicapped students together with some students themselves.

MAJOR FINDINGS

The findings are listed according to the study research questions:

Findings Related to Question #1

What impact does integration have?

1. Effects of integration on handicapped children are held to be variable, depending on individual characteristics of the children and on characteristics of the situation.

2. Anecdotal and opinion data tend to indicate that integration generally benefits handicapped students, particularly in a social sense.

3. Integration, to the level practised in Calgary, is generally held to be beneficial to the handicapped students. Most handicapped students were judged by their teachers to have been appropriately placed.

4. The presence of handicapped students can compromise the regular teacher's time and instructional adequacy to his/her non-handicapped students if appropriate resource support is not provided.

5. In cases where adequate resource support was provided, no detrimental effects on non-handicapped students were identified.

Findings Related to Question #2

What does the professional literature indicate about integration?

1. Research on results of short-term effects of integration are mixed, with no definitive conclusions emerging from the literature. The net weight of evidence is in favour of integration, but negative findings can be identified.

2. There is virtually no evidence on the long-term effects of integration.

3. There is general agreement that provision of resource supports beyond those required for the regular classroom are essential for successful integration. There is extensive discussion in the literature of models of resource provision.

Findings Related to Question #3

To what extent has integration been implemented in Calgary? What changes should be instituted?

1. The Calgary Board of Education has students placed at all seven levels of an adapted Cascade system.

2. According to estimates provided by Calgary principals, approximately 17% of the total student population of regular schools is said to be handicapped, using the study definition. The estimates at the elementary levels range from 10% to 15%, while the estimates at the secondary levels range upwards from 20%.

3. Approximately 7-8% of the 17% estimated handicapped students are receiving some form of assistance from a special education program. The remaining students who are not receiving special assistance are usually described as having mild learning, behavioral

or cultural problems.

4. More than half (53%) of the special classes in Calgary are in regular schools. Almost all of these schools practise some form of partial integration.

5. There is general criticism that the centralized special education services in Calgary are short-staffed. The Visiting Teacher and the School Psychologist services in particular were rated as inadequate to the task at hand by more than half the schools questioned.

Findings Related to Question #4

What are the activities of other Canadian school systems with respect to integration?

1. Services, defined as numbers of programs in support of both integrated and segregated education of the handicapped, provided by the Calgary Board of Education are at least as numerous as those provided by any of five other Canadian systems studied. Statistics on numbers of students served within these programs were not available for every system. Evidence which was available indicates that the performance of the Calgary Board with respect to integration compares favourably with the performance of all other systems.

2. None of the five other systems has developed a coherent program for integration, with explicit statements of philosophy, rationale, goals and implementation guidelines.

Findings Related to Question #5

What are the costs of full integration?

Findings related to costs have been developed in a separate report by Dr. G. Loken, Professor of Educational Administration at the University of Calgary. Dr. Loken will present his results verbally following presentation of the recommendations in this paper.

RECOMMENDATIONS

Recommendations have been proposed based on the following assertions and assumptions:

1. The Cascade principle of educating as close to the mainstream as possible is accepted. Recommendations deal with the means to operationalize this principle.

2. The regular schools of the Calgary Board of Education already, without further intentional integration, contain significant numbers of handicapped students. Resources to meet present needs are considered inadequate by many teachers and principals.

3. Successful integration requires time for thoughtful and comprehensive planning.

4. There will always be a need for some segregated facilities.

Recommendations are addressed to six different areas of need. The complete report lists 20 recommendations and 4 mentions of commendation.

A. The Need for Board Leadership and Development:

It is recommended that the Board develop and adopt: (1) a comprehensive statement of policy; (2) a statement of philosophy, rationale, goals, and objectives for integration; (3) a set of implementation guidelines for integration at all academic levels. (R.1)

The Board is commended for its accomplishments to date in implementing an adapted Cascade model, and in providing various specialized forms of service and assistance to approximately 8% of the student population. (C.2, C.3)

B. The Need for Individualized Planning for Integrated Students:

It is recommended that: (1) definitions of "handicap" which focus on educational needs rather than on student disability be developed and accepted, (R.2); (2) a review be made of current assessment procedures to ensure that they are congruent with the definitions (R.6); and (3) educational methods and monitoring processes congruent with the definitions be adopted. (R.7)

C. The Needs for a Longitudinal Impact Study:

It is recommended that the Board design measures for a longitudinal investigation of integrated handicapped students. (R.8)

D. The Need for Demonstration Schools:

It is recommended that a few demonstration schools be selected

to serve as models for improved resource supports for integration activity. A model for resource support at each of the Cascade levels is presented. It is expected that principals of the demonstration schools will construct needs assessments to determine which resources are required in their own schools.

In-service training, instructional materials, reduced class size, teacher aides, school tutors, resource teachers and Learning Assistance Centres are included in the resource model. (R.10)

E. The Need for Improved Strategy in all Schools with Integrated Handicapped Students:

It is recommended that those schools which have integrated handicapped students but are not among the demonstration schools selected as models: (1) be assisted to develop procedures to monitor individual programs of students (R.12); (2) consider implementing orientation and readiness programs for students to prevent formation of negative attitudes (R.13); (3) consider implementing community orientation programs (R.14); (4) receive in-service training for principals and teachers of integrated classrooms. (R.15)

The principals, special class teachers and regular teachers in schools with integrated special classes are commended for their accomplishments in partial integration of the special class students. (C.4)

F. The Need for Continued Board Support of Special Education Services and of Integrated Education:

It is recommended that: (1) the Board continue to provide its present complement of specialized resource personnel (R.18); (2) that the Board undertake an internal review of the functions, required competencies and activities of its specialized resource personnel (R.19); (3) that the Board consider hiring additional resource personnel as an interim measure for the next two years. (R.20) It is expected that the demonstration models of service to integrated classrooms may demonstrate patterns of referral and resource usage which differ from present patterns. Better information on resource usage should be available within two years.